DESIGN IN TOWN AND VILLAGE

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MINISTRY OF HOUSING AND LOCAL GOVERNMENT

DESIGN IN TOWN AND VILLAGE

PART ONE

THE ENGLISH VILLAGE

BY THOMAS SHARP
C.B.E., D.Litt., M.A., M.T.P.I., F.I.L.A., L.R.I.B.A.

PART TWO

THE DESIGN OF RESIDENTIAL AREAS

BY FREDERICK GIBBERD
F.R.I.B.A., M.T.P.I.

PART THREE

DESIGN IN CITY CENTRES

BY W. G. HOLFORD
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Professor of Town Planning in the University of London

LONDON
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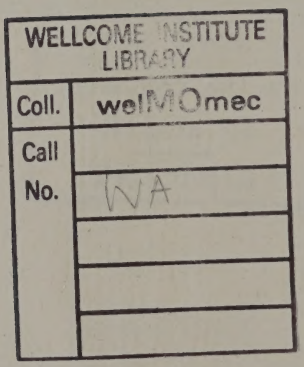

FOREWORD

THIS BOOK discusses problems of design in the grouping and lay-out of buildings. In the past thirty years a great deal has been done to improve the standard and design of individual houses. But the general effect has too often been dull and depressing.

It is very hard to analyse what makes a good design. But it is very important to try to do this; and—at a time when so much development and re-development is going on—to direct attention to some of the questions involved.

Three well-known experts in town planning have accordingly been asked to contribute, from their own experience, essays on the subject of design in relation to the building and re-building of towns, of suburbs and of villages. This seemed more appropriate than an official "manual" since the questions involved are matters of taste; and very much, therefore, matters for individual opinion.

The opinions expressed in this book and their method of presentation are those of the authors. That is as it should be. But one lesson we can all take to heart is that good design is not costly: it is not achieved by extravagant use of land, wide and draughty streets or lavish expenditure—indeed, the reverse. More compact building leads to better and more attractive grouping as well as saving land and reducing cost.

In recommending this book to housing and planning authorities, I would ask them when they study the contents, not to lose sight of this conclusion.

Harold Macmillan

CONTENTS

FOREWORD

BY THE MINISTER OF HOUSING & LOCAL GOVERNMENT

PART ONE

THE ENGLISH VILLAGE

PART TWO

THE DESIGN OF RESIDENTIAL AREAS

CHAPTER I: THE RAW MATERIALS AND THEIR ARRANGEMENT

CHAPTER II: THE ARRANGEMENT OF THE AREA

CHAPTER III: STREET PATTERN AND PICTURE

CHAPTER IV: SPATIAL LAYOUTS

CHAPTER V: LAYOUT WITH LANDSCAPE

PART THREE
DESIGN IN CITY CENTRES

CHAPTER I: THE PROBLEMS

CHAPTER II: THE STREET

CHAPTER III: THE ENCLOSED SPACE

CHAPTER IV: STREET FURNITURE

CHAPTER V: OPEN PLANNING

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PART ONE

THE ENGLISH VILLAGE

By Thomas Sharp

In this essay* I shall attempt to define some of the characteristics of the English village and to suggest some principles that should be considered in building new villages or in extending old ones.

It has sometimes been claimed that the village is a peculiarly English invention. Whether that is so or not, the English village is, I believe, among the pleasantest and most warmly human places that men have ever built to live in. And certainly it has a physical character and appearance that is strongly its own, whatever may be its points of similarity to or difference from other countries' villages as social institutions. It has very special qualities of picturesqueness (not, of course, to be confused with quaintness). I do not think that these qualities arise wholly or even mainly, as it is so often assumed, from the character of its buildings and the beauty of the natural forms, such as trees, which stand in juxtaposition to them. I believe that they lie as much or even more in the form, in the ground plan, which the buildings and the natural objects together make. But before I attempt to analyse that in some detail, it will be better, I think, to refer, first of all, to those points in the social character of the village which have strongly influenced or determined its physical appearance.

I shall limit myself to this particular aspect of social character for one reason only—that the rest of the social considerations lie outside the subject of this book. They are, of course, of vital importance. Nothing else about the village (or the town, or any other place of living) matters in anything like the same degree. The villagers, and their lives and relationships, are immeasurably more important than the village as a mere physical thing. Much has been written elsewhere about life in the country. The Scott Report (1942)† was full of sound suggestions about it. And there is room for many changes. But this book is concerned solely with physical design, so I need only refer here to the broad social considerations which have determined the physical form and appearance of the village in the past, and which may do so in the future.

THE VILLAGE AS A SOCIAL ORGANISM

At least one of these social considerations has been of prime importance. The village in the past has always had its economic roots in the land immediately surrounding it—or occasionally in the sea at its doors. The agricultural and the fishing settlement have all the quintessential character which the word village commonly calls before the mind's eye—though there is no reason why even the mining village, which in almost every physical respect is the direct antithesis of these, should not also, if it had developed in a different age, have been almost identical with them.

Now the point about the agricultural village, for my present argument, is that it is, or at least was, a comparatively simple social organism. Its purpose was to house the people who worked on the surrounding land (and, of course their dependants); these basically, but also necessarily those others who served them in various ways, whether as parson, publican, craftsman or shopkeeper. The social structure of the village was therefore extremely simple: and the shared interests, and (in the case of the

* Most of which is based on *The Anatomy of the Village* (Penguin Books, 1946) and on a paper *Village Design* in the Journal of the Town Planning Institute for May, 1949.

† Report of the Committee on Land Utilisation in Rural Areas. Cmd. 6378, H.M.S.O., 1942. Price 4s. By post 4s. 2d.

"Country Life"

FIG. 1 Ashwell, Herts. *The simplicity of form which is the essential characteristic of even the larger English villages—the church dominating, though the approaches to it are hidden.*

fishing village especially) the shared dangers, together with the clear simplicity of the social structure, produced a community which was comparatively simple in its inter-relationships and comparatively single-minded in its purpose.

From this fact of being economically tied to the surrounding countryside, and wholly dependent on it, there arose another cardinal characteristic of the village. Because of the small volume of labour required in agricultural activity (small, that is, in comparison to that required, for example, in industrial processes) and because there were until recently narrow limits to the distance which workers could conveniently travel between home and work—because of these considerations, the village has hitherto been comparatively small in size.

Here, then, we have had two outstanding social characteristics of the traditional village—simplicity and smallness. I think it is those characteristics that have broadly determined its physical appearance. A simple social structure has produced a simple material form: the simple social structure has subsisted because of singleness of purpose and the simple material form has subsisted because of smallness of size.

VILLAGE AND SMALL COUNTRY TOWN

At this point I find myself forced to attempt to define what I mean by a village, and to do that it is necessary also to consider what is the difference between a village and a small country town.

The difference lies fundamentally, I believe, in the characteristics of social simplicity and smallness. If the social structure of a village community becomes complicated by the taking on of activities outside the basic activity, then one of the essential characteristics of the village becomes compromised, and the place becomes the less a true village in proportion to the

FIG. 2 Kersey, Suffolk. *An example of the roadside or linear type of village, with the road curving so that there are no through views, and the church dominating the village. Note the absence of front gardens to the houses.*

degree of additional activity which it undertakes. Though the small country town may house many people who work on the land, it is also a market, a trading centre, for far more than its own inhabitants; it will probably also be a manufacturing centre in a small way. In the old days it would have a brewery, a flour mill or two, perhaps a tannery: and even though all these activities were related to the land in that they dealt with the products of the land, they brought about a complicated social structure that was different from the simple social structure of the village, and they produced a complexity of purpose very different from the singleness of purpose which, in my opinion, characterizes the true village. The fishing village which has become a popular holiday resort is perhaps the most striking example of the change that can be brought about by taking on new activities.

The further point of difference lies in mere size.* As a place becomes more complicated in its activities, so generally though not inevitably, it tends to grow bigger. This necessarily brings about complexity in its physical form. But size in itself, even without complexity of activity, is a deciding factor. Even a purely agricultural settlement that was very large would be almost bound to have complexity of form. And that complexity, I believe, is alien to true village

* The Scott Report (Cmd. 6378: 1942) defined "any compact grouping of over 1,500 people as a town", as distinct from a village. But an overgrown village will not easily acquire country-town character in the traditional sense. That character, in the central parts of the town especially, is quite distinctively its own and is even more difficult to define than village character—partly because of the great range in size of country towns. One essential difference besides that of complexity of form lies in the larger scale of the buildings themselves, especially in the main streets. But there are many far more subtle differences than that.

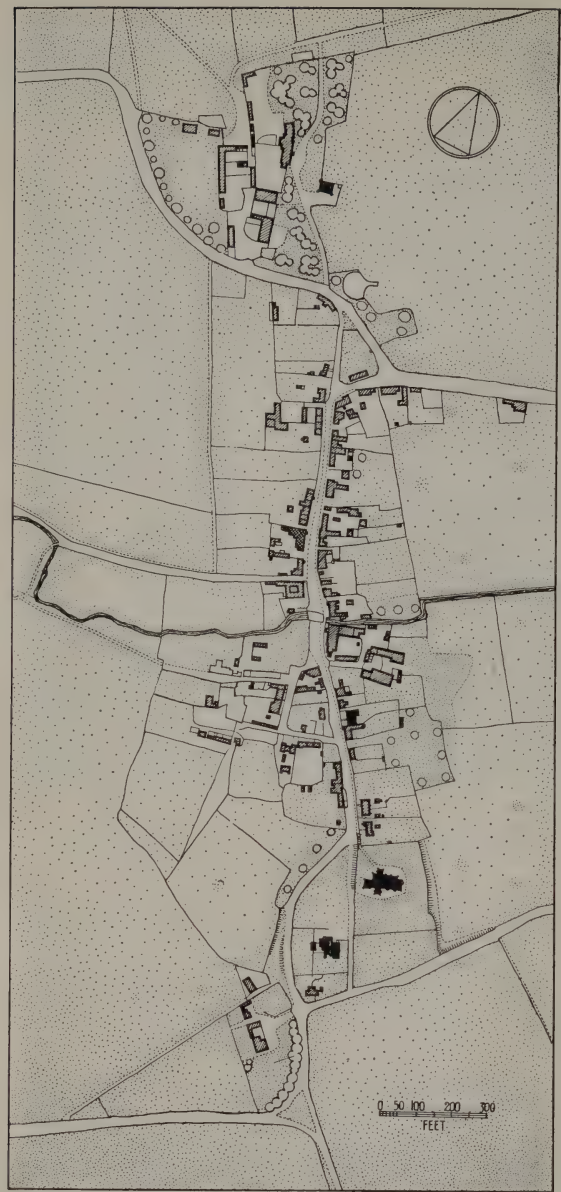


FIG. 3 Kersey, Suffolk.

character. It is the villages of about 300-450 inhabitants (the commonest size) that hold the pure spirit of the true English village. Above this size their form begins to get complicated: and at a population of more than about 1,000 the complication becomes so marked that true village character becomes increasingly compromised and soon disappears altogether.

VILLAGE CHARACTER

I have been speaking of simplicity of form as an essential attribute of village character. I must try to define that more particularly, though to do so is difficult. First of all, take the dictionary meaning of simplicity. To be simple means " consisting of one element, being all of a kind, not being complicated or elaborate or adorned, or involved or highly developed: plain in appearance or manner, unsophisticated, straightforward ". The attributes of consisting of one element, of being all of a kind, I have already adumbrated. The rest are clearly to be seen in nearly all the ten thousand and more villages and hamlets which England is said to possess.

They are especially to be seen in the outline form, the ground plan. This ground plan is so simple, so elementary, that it is immediately apprehensible. There are, for the main part, two broadly distinguishable types of plan, though of course a great many villages display something of the characteristics of both types in one. There is the roadside or linear type (Fig. 3), and there is the squared or enclosed type (Fig. 4)—the first type being commoner in the south of England, and the second, no doubt for reasons of defence and climate, being more frequent in the north. The one is a short ribbon: the other is a kind of knot or blob. In neither case does the simplicity lie in regularity. On the contrary the form is nearly always irregular, sometimes markedly so: but in spite of the irregularities, simplicity remains because generally the outline stands together as a single whole (though in some exceptional examples there are parts which are almost wholes in themselves); that is to say, there are no distracting competing elaborations of certain elements such as bring complexity into the picture. All this may sound a very complex way of analysing simplicity: and it may be better not to get any deeper into definitions. Perhaps it will be sufficient merely to emphasize again that one of the main characteristics of the ground plan of the true village is that its outline pattern at once declares itself and is easily apprehensible.

But, at the same time, though it may sound like a contradiction in terms, there are nearly always certain subtleties of detail within the

FIG. 4. Hutton Rudby, Yorks.

An example of the squared or enclosed type of village tucked into the bend of a river. The road runs between greens, and there are rough-surfaced service tracks and footpaths across the greens and in front of the houses. There are very few front gardens. The views inwards and outwards are all well contained; the place is not a local incident but a local climax.

simplicity of outline. Even in the elementary form of the roadside village the siting of the main village buildings is such that striking pictorial qualities result. The church will generally be at a turn of the road, or at the head of the village street, dominating it (Fig. 2 and 7). A manor house, a group of almhouses, a tithe barn, an inn or some other building will be so situated as to create a telling effect within the general picture. The frequency with which this happens is astonishing. Why it happens it is difficult to say. No doubt there are historical explanations for it; for it must be more than a result of blind chance. But this is not the place to attempt explanations; and it must suffice here merely to make the point—which, of course, is well enough known already.

THE VILLAGE AS A PLACE

There is another essential point with regard to physical form that should be made, a point which has great pictorial importance, but still greater importance and significance in social psychology. In almost every English village that I know, even in the simplest roadside villages, the road plan within the village declares the existence of the village as a place, a significant point, a local climax, the home of a community. In all the thousands of villages throughout the country, by virtue of some slight curve or some sharp twist within the village or at its extremities, the roads seem to enter and leave the place, rather than merely push it aside as they seem so often to do in other countries (Figs. 3, 4 and 6). Here again, there

FIG. 5 West Burton, Yorks. *W. A. Poucher, F.R.P.S.*
Another example of a squared village. Note the natural unkerbed line of the village green where it edges the road.

FIG. 6 Deddington, Oxon.
An example of a finely-curving village street. An example, too, of defacement by electricity and telegraph poles.

FIG. 7 Coxwold, Yorks.
Another example of a roadside village dominated by its church. Note the little unenclosed flower strips to the houses on the far side of the green.

FIG. 8 Milverton, Somerset.
A village street with a marked quality of urbanity yet little or nothing of urbanness. Note the wealth of plant growth in spite of the complete absence of front gardens. The colour and texture of the cobbled path contribute to the character of the street.

are probably historical reasons; but again this is not the occasion to go into them. Again one can only draw attention to the fact (a fact, this time, which seems to be less realized) and suggest that it must be given its due significance in future village building. That significance cannot, I think, be over-emphasized. The views into the village are closed—it is the local climax. The place itself is enclosed—it is a home. In other words it is the village that is vital, that exists in its own right: its roads are intrinsically the means of going out and coming in, not merely of passing through.

But, in spite of these and other subtleties of effect, there is, as I have said, a marked simplicity about the outline form of the traditional village. And so there is about the details within that outline form. The simplicity of the outline is generally strengthened rather than weakened by the subsidiary elements. This occurs sometimes in a negative rather than a positive way: by omission rather than by design—but is none the less vital for that. The most important example of this is the absence of subsidiary enclosures which would confuse the simplicity of the main enclosure made by the buildings: and this is particularly illustrated in the absence of enclosed front gardens. There are, of course, villages where the majority of the houses have enclosed gardens at the front, but, to me at least, they never seem to hold the essential spirit and quality of the true village. It is astonishing to modern suburban-conditioned eyes that the enclosed front garden is uncommon in an old village. (Figs. 1, 2, 3, 4, 6 and 8.) But it is so. Generally the houses front straight on to a green, or, in the roadside villages, straight on to a public path with only a narrow strip of earth between, a few inches wide, where a few modest cottage flowers, artlessly arranged, soften the hard line between plinth and path (Figs. 8 and 9). And it is the same with other features. The village green, the trees, the pond and the rest of the common features are never elaborately arranged or highly developed in some complicated relationship to each other and to the rest of the village. Though they have their subtleties, the effects they create are essentially of the simplest kind.

"*Country Life*"

FIG. 9. Chaddesley Corbett, Worcs.

A more typical example of village paving to-day—little or no contrast in texture and colour between footpath and carriageway—and a considerable loss in appearance as a result.

TRADITION

I have attempted so far only to speak of some of the simple characteristics of that simple creation, the *traditional* English village. I make no apology for having dwelt on traditional forms. To consider these does not, I think, mean that one is taking a sentimental view of the village. Sentimentality is excess. But since most of the new buildings in the countryside will be attached to existing villages, it will not be sentimentality, but only good sense, to show some regard to what is being added to.

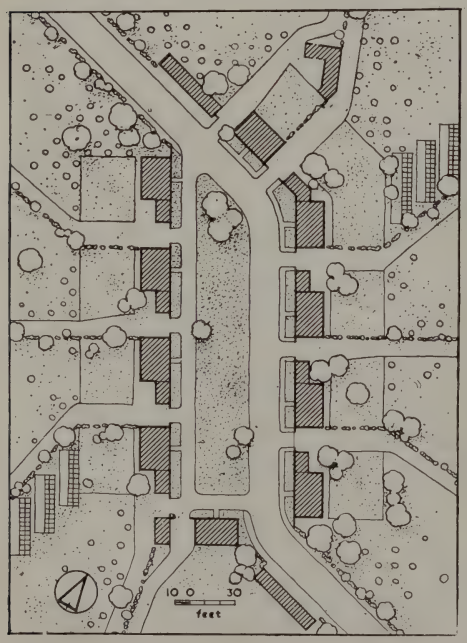
Even though it be acknowledged that additions to existing forms should show regard for what exists, where that is good (and the degree of regard will to some extent be in proportion to the degree of goodness), it may still, of course, be doubted whether a new creation should show any concern for tradition. Perhaps this question is largely an academic one,

for it is unlikely that there will be many new villages built in England now. The pattern of village settlement has been pretty well complete this last hundred and fifty years; and new villages or hamlets will only need to come into being where there is some departure in an extreme degree from the present rural economy. There will be *some* new places. There will, for example, be new forest villages in certain remote and thinly populated hill districts which even now, in the change from sheep-rearing to timber production, are undergoing an agrarian revolution far greater than that which changed the face of large parts of England in the eighteenth century. And there could, and *should*, be new hamlets instead of the planless scatterings of houses which disfigure the districts where intensive cultivation by market garden or small-holding is practised (Figs. 10 and 11). New villages of this kind will have the simplicity of social structure which accompanies shared or common forms of work. But that is no longer present in the great majority of existing villages, especially in those near to towns. And though it may be true, as I have argued, that the simplicity of these old villages arose out of a simple social structure, that will not generally, under the conditions of today, be a valid reason for continuing the traditional forms. The real argument in favour of continuing (and adapting them), in both new and old villages, is not, in my view, the difficult and perhaps dubious one of ' maintaining harmony ' or anything of that kind, but rather that these basic forms continue today to be essentially good for living places in the countryside.

It has become fashionable in some architectural quarters to deride considerations like these (and the sentimental conservatism which regards ' tradition ' as a kind of stagnant pool rather than a continually-refreshed spring deserves derision, and is more dangerous than this over-revolutionary attitude). A few self-consciously ' advanced ' architects in pushing too far the proper claim that modern needs must have modern expression, may prefer to think of a modern village as, for example, a simple skyscraper of flats, or a series of short separate terraces, each four or five houses long, standing at right angles to a road with windy spaces of communal gardens between. But while such a flinging aside of tradition may be intoxicating for a designer, it would, I believe, in this instance be wrong. I believe that something like the traditional form of layout, and especially the enclosed form to which many old villages are built, is the most *sensible* form (and not merely the most attractive) that can be devised for a communal home in the country.

In my belief, the sense of enclosure is important in men's habitation everywhere. And I believe that it is doubly so in the country. It may be that the satisfaction that it gives arises in part from early instincts of mutual protection against lurking dangers. But it is far more than the satisfaction of a subconscious need of protection against old instinctive fears or even for protection against weather (which, incidentally, is particularly shown in the way fishing villages turn their backs to the sea). There is a deep psychological satisfaction in it. And we have to remember that such satisfaction arises in the directly opposite direction from that in which the townsman finds his escape to the countryside. For people in towns, where views are close-focussed and canalized, an open view in a park, or along a river, can afford great pleasure through relief and contrast. But to people whose working hours are spent in the fields and the open places of the countryside the limitation of the view by enclosure in the places where they live provides a kind of psychological refuge. I am, of course, speaking of comparative, not complete, enclosure. There will always be views of trees and fields and hills beyond a village, or down the roads that run out of it, and from rooms that look outward into the country—and exquisitely pleasant all these can be. But even these are pleasant chiefly by way of contrast with a general sense of being enclosed within a communal home, as within the walls of one's own room. Thus, in my opinion, the enclosed form of the traditional village is still the form we should give even to our new villages today.

While I am dealing with this matter of tradition in form, it may be desirable to go a little further and speak of the question of



FIGS. 10-11. Grouped Small-Holdings.

The planless scatterings of houses for small-holders, or their deliberate development in widely-gapped ribbons, have been even more regrettable in their effects on the countryside in the neighbourhood of towns than the inroads of suburbia; for, being agricultural developments, they might have been expected to show some respect for landscape. The reason for the thin scattering has generally been stated to be that the small-holders must live on their holdings. But that condition need not prevent their being gathered into hamlets. And it is surely far better, for social as well as for landscape reasons, that they should be.

These diagrams show one design for such a planned grouping. The requirements generally are for holdings with a minimum of about 10 *acres, while some should be up to* 20, 30 *or even* 40 *acres, and the plots should be of a reasonable shape for working and supervision—which means roughly rectangular plots for tractor-ploughing. Probably the maximum number of plots that can be grouped together is about ten. If the frontages of the plots are not to be more than* 60 *feet (and it will be difficult to get any architectural cohesion if they are) it means that in each case there will be an irregularly shaped piece of land between the main plot and the house: but this can very well be used for private garden space, glasshouses and orchards.*

A hamlet of ten houses would, of course, be too small to have even a shop of its own. For major social purposes it would have to depend on a neighbouring village. But in the parts of the country where this intensive form of agriculture is practiced, a whole system of such hamlets, half a mile or so apart, might be developed.

Figure 10 *shows a general plan of a group of holdings: and Figure* 11 *one possible layout for the hamlet itself. (Note: both figures are based on illustrations in* Conurbation 1948).

tradition in general. I hope that it is not necessary to explain at any great length that in demanding respect for well-tried traditions I am not suggesting that we should *imitate* the past, and extend our present villages or build our new ones to resemble the old as much as possible. There is a world of difference between learning from the past and copying from it. While, for example, we can in my opinion, learn much from a study of the plans of old villages that will enable us to show how particular effects can be obtained by certain broad forms and by their interplay upon one another; and while, further, we may establish, as I think we can, that 'free' planning will enable us to obtain something like true village character while a more rigid planning will certainly prevent our obtaining it and will give us something entirely different—while we can do these things, it would, nevertheless, be miserably mistaken to attempt to create by conscious design the detailed effects of irregularity which have arisen out of the absence of conscious design. I do not, of course, suggest this or anything like it. On the contrary, I think that our new villages, and our village extensions and in-fillings, while they should contain all the true village character that we can give them should be straightforward and honestly contemporary in their form.

TRADITION OLD AND NEW

Where it is good to go even directly contrary to tradition for some well-considered reason, I think we should do that. This is not the place to discuss questions of countryside preservation, but it may be of some interest to mention the considerations which have led to a deliberate departure from tradition in recent village building in one part of the country. The Forestry Commission is building a series of eight new villages in its great new forests in the remote valleys of Northumberland just south of the Scottish border (Fig. 12). The hills there, above the narrow winding valley bottoms, have hitherto been clothed in soft gradations of greens and fawns and rust browns of bent grass and bracken and heather. The scattered farmsteads and shepherd's cottages have traditionally been built of a grey brown stone, stone-roofed.

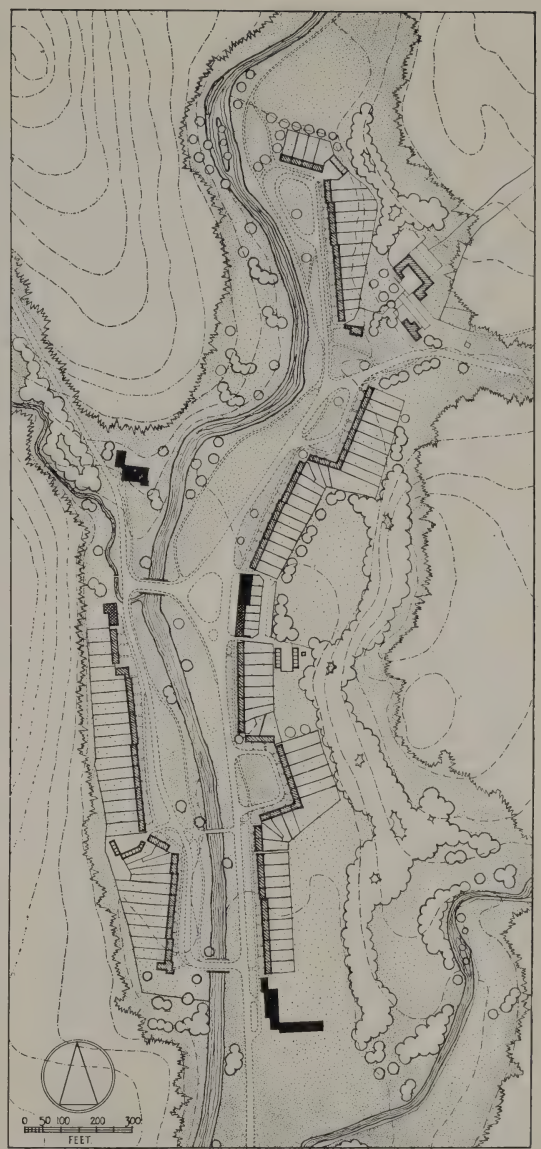


FIG. 12. Comb, Northumberland.

A medium-sized new village (population 400) for the Forestry Commission. It occupies three or four level fields alongside a mountain stream; and its form has been determined by the course of this stream. (The contour lines are shown at 10 feet intervals). The church has been sited at a point well above the general level of the village: and the village centre, with the hall, pub and one or two shops, has been sited by the paved space at the bridge-head. The houses will be washed in white and cream: and the public buildings will be of stone.

But the new forests are taking all the soft flowing colours out of the landscape and are clothing it, for distances as far as the eye can see, in an unchanging monotone of blue-green. The old stone buildings would be lost in this: so the Commission is having the new villages (except the main buildings, the churches, the village halls and others) finished in white and cream wash, which though it is familiar in the County Durham landscape sixty miles or so to the south, is quite untraditional in this particular countryside. In this way the new villages will not only be lively in themselves, they will enliven many a forest panorama. Here will be a wholly untraditional development. But then the new landscape itself will be wholly untraditional too. I think that departure from the building tradition in circumstances like these is not only justifiable but is actually called for.

Such radical departures will not be commonly necessary or desirable. But nowhere, except perhaps in wholly unified places such as certain Cotswold villages, should we allow ourselves to be over-intimidated by considerations of tradition. If the new buildings in an old village are simple and straightforward and if their materials show in their colour and texture a decent acknowledgment of those already existing, then I believe that, providing their form is good, they will sit happily among the older buildings and will contribute to the effect of the whole rather than detract from it.

PLAN AND FORM

Providing their form is good—that in my opinion, is the real crux of the matter. But somehow the appreciation of form seems to have died these last fifty years and more. In all the additions to villages during this century that I know of, very few are other than alien

FIGS. 13-14.

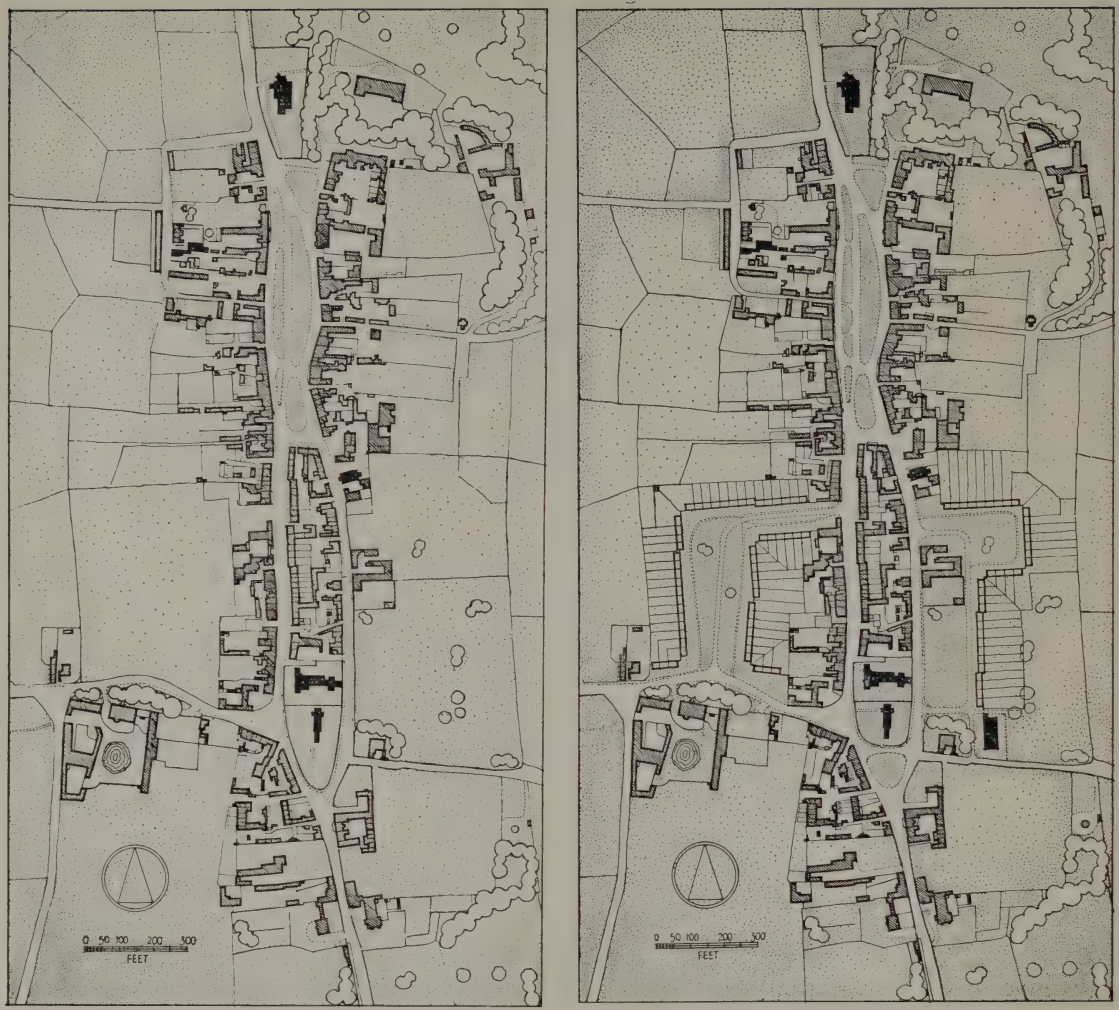
The plan of the village as it now exists (13) *shows a combination of the roadside and squared types. It is a large village* (*population about* 700)*: but the second plan* (14) *shows how it can grow half as big again, partly by* '*in-filling*', *partly by carefully integrated extension, without its character being compromised.*

14

to the village they have been tacked on to. Even good architects seem nowadays to have little awareness of what is needed in the sympathetic site planning of buildings in association in a village. I think that it is partly because there is some curious inability to observe and accept the essential simplicity of village form: but it is also because we have become blinded by ideals arising from the garden-suburb concept. As it is in the garden-suburb, so it is in the garden village—the emphasis is all on the garden; and in the end, village additions have been merely suburban additions. And a suburb, in the modern meaning of the word, has both an impure and a complicated form. Whereas, as I have tried to show, the real essence of the true village lies in its simplicity.

Now even though, as I have said, it is likely that few villages will in the future retain their old simplicity of social structure, I think that we must nevertheless try to maintain simplicity of physical form if we wish to retain village character. The simplicity of our new work will be conscious simplicity, not the unconscious simplicity of the old. And we shall have to be careful not to fall into affectation. But providing that our conscious attempt to achieve simplicity is honest and sincere, providing our motives are true, and providing the simplicity aimed at is functional and not merely aesthetic, we should be able to avoid the errors of affectation. Indeed I think we may best achieve simplicity in a negative rather than a positive way by avoiding the use of elaborate, complicated, fussy and involved forms as much as (and probably more than) by positively aiming at simplicity: and in saying this I am not speaking merely of forms which are involved in themselves, but those which are involved in their relationships to the rest of the village.

A particular though extreme example may help to make my meaning a little clearer. Take the cul-de-sac. It is a form which has been used extensively in village additions: and, to my mind, nearly always with disastrous effect. It may be regarded as a simple, if sophisticated, form in itself, though when it is



FIGS. 15-16.

Another example of large-scale extension " in character " with the existing village.

given the necessary turning space at its dead end its architectural effects become involved: and when it is given, as it so often is, the squalid fencing which in some ways so typifies our age, its interior forms become extremely distracting as well as elaborate. But even in its pure form it brings a complication into the village pattern, since, because of its greater depth in proportion to its width, it is clearly something added to and elaborated upon the main form instead of being part of it: and because of this it is both alien to the main form and destructive of its simplicity. The shallow quadrangle can, I think, be successful in a village if it is used in a free rather than a rigid or monumental way (Figures 12, 14 & 16). It can be used successfully because the proportions of its form—little depth in relation to width—keep it within the main form of the village as a whole: whereas in the cul-de-sac the opposite occurs.

Simplicity of effect will lie in the continuity as well as the shape of the building forms.

FIG. 17 Ditchingham, Norfolk. *Tayler & Green, Archts.*

Rural housing with attractive simplicity of plan and form.

Though there is marked irregularity in the building lines in most old villages—little sudden juttings forward and settings back—there is a great deal of neighbourly continuity in the buildings. I think that the building of semi-detached and small detached houses has been more destructive of true village character than anything else that has been done in recent decades—and it is even more destructive when they are built in groups; and more so again when they are given hipped instead of end-gabled roofs, as they generally have been. It is not merely that this kind of building has an irredeemably suburban flavour; the restlessness, complication and confusion of its gappy surfaces and silhouettes is the very opposite of the simplicity that is essential in the village. I believe that the terrace, or the row, is the only satisfactory form anywhere for buildings in close association: and I think that large-scale grouping in continuous building formation is as important in the village as it is in the town. One difference between a village terrace and a town terrace (besides the important one of the probable difference in scale) lies in the likelihood that a town terrace will be in some formal or near formal relationship to others, whereas in the village it will be better if it is not. A freer relationship, a freer planning, will be more in character here. In an avoidance of the more obvious and rigid geometrical relationships, for example, a village terrace may very satisfactorily splay away from the facing row of buildings, instead of being parallel to it. But though there may be (and, I think, should be) differences of this kind in its use for broad effects, the terrace or joined row is essentially a village as well as an urban form of building. And I think that the village terrace should be a clean straightforward block of buildings without any attempt to romanticize it into irregularity, or to 'soften' it with architectural whimseys. If it is a very long block it may be pleasant that it breaks forward or back a few inches at a change of direction. But it will be affectation, and unsuccessful affectation at that, to try to give a

FIGS. 18 (above) and 19 (below).

A village extended to nearly twice its original size on a plan which not only integrates the new with the old but actually seems to complete the pattern.

new row the irregularity of the old buildings. And it will be equal affectation to ' compose ' it, with architectural features, with balanced projections at the ends and in the middle, as ' renaissance ' and garden-city architects did. The more deliberately designed housing schemes in the inter-war years were often far over-elaborated in this way, as when, for example, semi-detached cottages were designed and grouped at the edge of a Cotswold village in the form of a series of identical minor manor-houses. I believe that the simplicity of a row of buildings well-designed simply as a row of buildings is far more in character with a village than that kind of pretentious over-elaboration (Fig. 17).

FREE-PLANNING

I have spoken of ' free ' planning in contrast to ' rigid ' planning. Since I believe that plan-form is the most important single consideration in achieving village character, I must try to make clear the difference between these two kinds. I might have used the words ' organic ' and ' inorganic ' instead of ' free ' and ' rigid ': but while that might have been more in tune with our current jargon, it would not have made my meaning any clearer—especially since what I have in mind is a technique rather than a concept of planning. I do, of course, mean that monumental planning, with its paraphernalia of axes and cross-axes and the various *formal* relationships of different parts to each other and to the whole, is entirely unsuitable to the village: but I do not, on the other hand, mean that the appropriate concept is what is known as ' informal ' planning. What I mean is letting the plan-form evolve out of the conditions and disciplines of the site rather than dragooning it into either formal or informal shapes according to preconceived notions.

Letting the plan evolve—that to my mind is the essence of village planning. And here, I believe, current techniques of design, especially as taught in most architectural schools, may be a very real handicap to the planner. There are great dangers, in any form of planning design, in making pleasant-looking shapes with a nice soft pencil on some comparatively small-scale plan (like the 1/2500 Ordnance Map), and in treating the result as an esquisse to be worked to finished designs on a larger scale. In my experience it is worse than useless to adopt this kind of technique in village planning, whatever may or may not be its usefulness in architectural design. It is worse than useless because it is highly dangerous. This technique of developing a design through esquisse and rough-draft stages to a finished product produces the inorganic, the rigid, the over-elaborated forms which are alien to the very simplicity of the village. I believe that the way to design a plan for a new village is first to consider in one's mind the main determining factors (i.e., the levels of the site, the approximate positions of roads, etc.) and then to proceed straight away to design to a large scale (such as 1/500), and to work, with fair precision in set-square and curve, outwards from the position where one has decided the village centre should be. In other words, to let the design itself grow, freely and gradually, as villages themselves have grown in the past. And I think that something of the same kind of technique should be applied even to planning additions to an existing village—the technique of letting the plan evolve freely and simply, and of avoiding the imposition of symmetrical, geometrical and rigid shapes, however satisfactory they may look in a paper design. And there is an inevitable corollary to this—that the design for an addition to a village should not be made all by itself on a nice virginal piece of paper, but rather on a large-scale plan which shows at least extensive adjacent parts of the village, if not the whole of it.

This method of procedure, this technique of design may, of course, be a matter merely of individual temperament. There may be other ways of achieving free planning. But to this point at least I hold firm—that only by free rather than rigid planning can we give our new village building the simplicity and robustness that are its essential attributes.

VILLAGE LANDSCAPE

If a freely-planned *simplicity* is the prime attribute of building forms in the village, so surely it is in the landscape form also. One would have thought that that at least should be obvious in a country where once the art of landscape was more finely developed than in

FIG. 20 Biddenden, Kent.

Examples of footpath paving from two Kentish villages. The old paving is often too rough for comfortable walking, but there are many forms of setts and cobbles which will give a sufficiently level surface and which give a pleasant play of colour and texture when contrasted with to-day's ubiquitous tar spray. But paving, as so much else in the village, should be simple. Patterned paving as in gardens, town squares, and forecourts would be quite out of character.

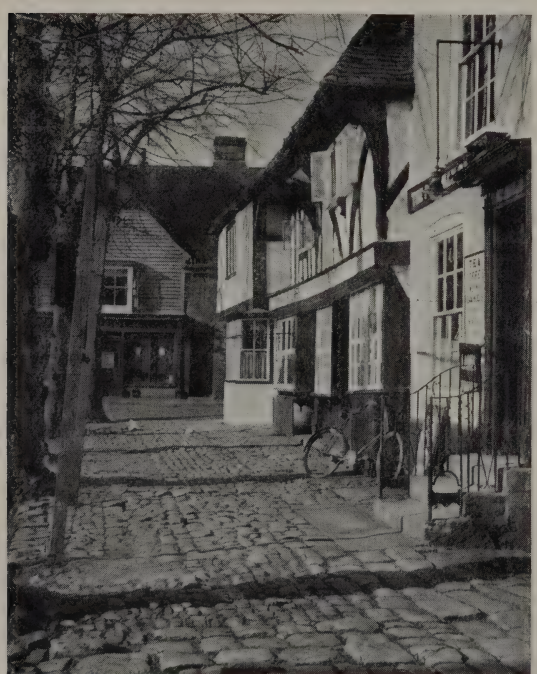


FIG. 21 Lenham, Kent. *H. S. Newcombe, F.R.P.S.*

almost any other part of the world. But that it is not so now can be seen in all too many examples of villages which have been 'improved' by the kind of treatment that is appropriate for village gardens. There are places where flower beds and rockeries have been made on the village green ; and in most places there seems to be a belief that the only trees worth planting now are little flowering trees—preferably with pink blossom. It would be an even sadder thing to see our villages thus vulgarized with inappropriate natural forms than it is to see them scarred by bad building, were it not that the trees and bushes and flower beds can be at least be got rid of more easily than the buildings.

It seems to me that much the same kind of considerations apply to landscape forms as to building forms in the village. Simplicity is the essential attribute and, again to define it, simplicity means " consisting of one element, not being complicated or elaborate or adorned, or involved or highly developed." I think that the

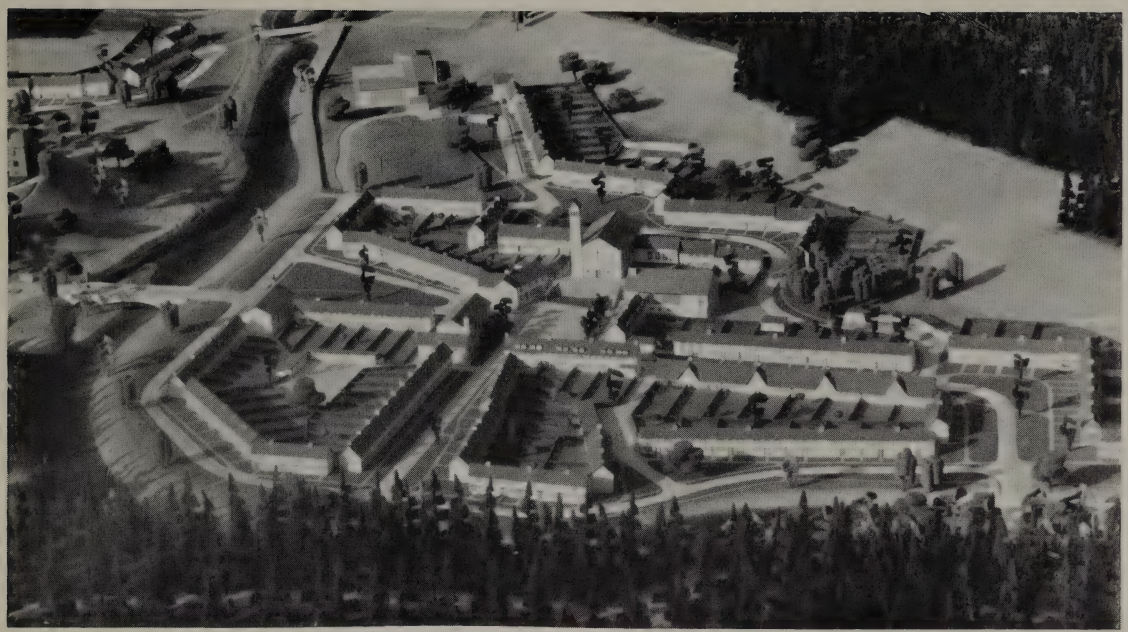


FIG. 22 Kielder, Northumberland. "*Messrs. Preview,*" *Modelmakers, Westerham, Kent.*

A view of a model of a new village which is being built (one of a series of eight) by the Forestry Commission in connection with the development of great new forests in the hill country south of the Scottish border. This will be the largest of the villages. It will have a population of 800-900. *It will therefore come into the class of village described here as being so large that its form is beginning to be complicated. Nevertheless the design deliberately aims at creating true village character without imitating the past or sacrificing the present or the future.*

reason why such things as flower beds, shrubberies and rockeries are so unsatisfactory in the public places of a village is not merely that they offend one's sense of what is appropriate but because they introduce a confusion and over-elaboration of shapes. Anything—the planting of hedges as well as of flower beds and shrubberies—that tends to produce or emphasize sharply-defined subsidiary shapes and enclosures within the main enclosures is bound to produce a sense of restlessness and confusion. The use of the roadside kerb at the edge of any grass area, whether village green or wayside verge, is damaging and unpleasant for just that reason. The essential characteristic of the landscape of the 'floor' of the village is surely that it should be flowing, natural-looking and simple.

The arguments for using only the nobler kind of trees are partly of the same sort, for the diminutive tree or bush is so near the ground that it breaks up the continuity of the 'floor' of the village and interrupts the view at eye-level. In its blossoming, too, it introduces "elaborations and adornments" and a lack of "plainness of appearance or manner" which are the opposite of simplicity. But the matter of scale is at least as important as these. The place for the small flowering tree is the garden. It is too finicking for the public spaces of the village. The more generous and noble trees—the common substantial trees of the countryside—can readily be accommodated there: and it is these, in my view, that should be planted.

So in planting as well as in planning it comes back to simplicity. That is the key to it all. It is the key to the hundred and one matters of detailed design and construction which cannot be discussed in this short essay, as it is in the broader matters that have been. And if one needs a phrase to sum up these ideas that have been advanced here, it might be put thus—the essence of true village character and good village design is simply simplicity.

PART TWO

THE DESIGN OF RESIDENTIAL AREAS

By Frederick Gibberd

CHAPTER I

THE RAW MATERIALS AND THEIR ARRANGEMENT

DESIGN AS AN AESTHETIC PROBLEM

The term 'design' in connection with residential areas means the arrangement of the various parts—the houses, roads, paths and so on—in such a way that they function properly, can be built economically and give pleasure to look at. The appearance of the area develops from its function and the way it is built, and is not something which is applied after the scientific, constructional and economic problems have been solved. These latter problems which are at the root of design, have received a fair share of attention in technical publications, and, judging by results, are better understood than those concerned with appearance. The following chapters are therefore primarily concerned with the aesthetic problems of the design of residential areas.

The term 'residential area' is commonly taken to mean an area of urban development in which the majority of buildings are dwellings and from which conflicting buildings are excluded. The term can conjure up many different mental pictures varying from a London Square to a large dormitory estate, or from areas of standardized one-class houses to estates in which there is a mixture of social classes and building types. It is, therefore, desirable to arrive at some idea of those characteristics which are, or are likely in the future to be, essential to a residential area.

It may be said at the outset that the area must have its own identity and give the residents the feeling that it belongs to them. This simple and obvious idea, which is difficult to realize and is seldom realized today, requires two essential conditions to its fulfilment: first, every part of the area must be within reasonable walking distance of every other part—for a journey by car or 'bus gives the feeling of going to another place; secondly, it must be a unity, a complete and harmonious whole.

It has now become generally accepted that an area of dwellings, however well designed, is not by itself sufficient to meet the needs of the inhabitants. Schools, shops, playing fields, a meeting hall and other communal facilities are necessary to meet these needs, and an area which contains them is generally called a neighbourhood. So much has been written about this idea of a residential area as a neighbourhood that it is only necessary to mention in passing two problems about which there appears to be some confusion.

The first concerns the size and shape of the neighbourhood. Many authorities have recommended some particular size, usually between ten and twelve thousand people, but there are existing housing areas of two or three thousand people which are very definitely neighbourhoods, and there are others which are much larger and just as satisfactory. So much depends on the personal preferences of the people, on the

structure of the town as a whole, on the social equipment available and on the topography, that there may be very wide variations in size and shape between one neighbourhood and another.

The second point about which there is some confusion is the relative importance of the social patterns. Many designs for neighbourhoods, for instance, are based almost solely on the school structure, the dwellings being grouped in relationship to the Nursery, Infant and Junior Schools. But, although the school is important in community life, the shop is just as important in another way. The neighbourhood pattern should embrace everything which people of all ages need in common, and a reasonable balance must be struck between them.

THE HOUSING UNIT

There are many who contend that the smallest size for a neighbourhood is about three thousand people, as it begins to be difficult with a smaller population to support a reasonably equipped primary school and enough shops to form a shopping centre where neighbours will readily meet and mix. Certainly, an area without a Primary School and without a shopping centre that really looks like a centre, will be lacking in some of the things commonly accepted as being essential to a neighbourhood. On the other hand, it may be argued that three thousand people is too large a group for all to know each other and to be neighbourly in the sense of the village green, the street, or the block of flats. This has led to the idea of a much smaller unit of, roughly, between three hundred and a thousand people, which may be called a housing area or housing unit. Such a unit will not, of course, include all the needs of the normal neighbourhood, but there is no reason why a series of housing units should not be formed into a neighbourhood.

There is a strong aesthetic argument for subdividing the neighbourhood into housing units. An area of some two or three thousand dwellings is likely to be exceedingly dull in appearance, simply because there is so little visual relief from bricks and mortar. Even a variety of dwellings will not help matters, because a general impression of the same kind of development will remain—witness the pre-war speculative housing estate. If, on the other hand, the area is subdivided into a series of areas, each designed to have its own characteristics (so that it is distinguished from the others), and if all of them are held together by the structure of the neighbourhood plan, there will be variety through the contrasts between each area and unity within the neighbourhood as a whole. The first neighbourhood at Harlow has been built on this principle (Fig. 31) so it is now possible to judge its merits.

THE RAW MATERIALS OF DESIGN

Every object in the urban scene, down to the smallest detail like a kerb-stone, affects the appearance of the area and must be considered in the design. These objects may be termed ' the raw materials ' of design and they can be classified into three basic types: the land upon which the buildings are erected, the buildings themselves and the roads and paths giving access to them.

The designer must consider the form of the land, for few sites are entirely flat, the natural features on it like trees and hedges, the quality of its surfaces, and above all, its general character. He must think not only of the forms of the individual buildings, but of their relationship to other forms; and, he must consider the lines or ribbons which the roads and paths make across the land, both as things which are seen and as a series of viewpoints from which other things are seen. In short, the design of a residential area embraces the arts of landscape design, of architecture and of road design; each art loses its individual identity and coalesces into the much wider and more difficult art of town design, or civic design, as it is variously called.

One of the chief reasons why so many residential areas are unsatisfactory in appearance is because the different aspects of the problem have become departmentalized. A scientific survey is first made of the site, a road pattern is then superimposed upon it, standard house types are erected on the road frontage, and, finally, some trees and grass verges are planted in the vain hope of ' beautifying ' the result.

FIG. 23 Hadley.

INFLUENCE OF DWELLING FORM ON LAYOUT

Although the layout of a residential area begins with the integration of landscape, roads and building groups into one master design, it can be said with equal truth that it also begins with the design of the dwelling itself. The family is the basic social unit and it is just as important to obtain the right kind of environment for the home life of the family as it is for its wider communal life. The problem is thus attacked from two opposite poles in scale; the town planner's small scale development plan, and the architect's large scale design of the individual house.

This book is not concerned with the design of dwellings, but the point must be stressed that the layout cannot be successful unless it embraces the design of the individual buildings.

FIG. 24 Lyme Regis.

In sketching the broad lines of a neighbourhood pattern it is only necessary to have an approximate idea of the proportion of dwellings of different types, but in the detailed design of the housing group a great deal is dependent on the form and pattern of the buildings.

It is obvious that a house which is suitable for one particular view or orientation will not necessarily be suitable for another, and so most local authorities provide themselves with a series of house types for different aspects. But this is only the beginning of the problem, and more often than not, leads only to the dreary process of assembling house types on a predetermined road pattern—a sort of tatting at twelve to the acre.

Successful design can only be achieved when the form of the building is related to a particular environment. The external appearance of the building itself is developed from the activities that go on inside it—modified, of course, by the system of construction; but the forms of buildings react on one another and on the landscape, and in consequence the design of the individual building has to be adjusted in the interests of the scene as a whole. Housing layout is commonly regarded as being the arrangement of a pattern of roads, building and landscape; and so it is in the first place, but it ends up, or should end up, with a series of pictures, each of which should be a satisfactory composition in all its details.

URBAN SPACES

A single building standing by itself in the landscape (Fig. 23) has colour and texture, mass, silhouette and line, all qualities which the landscape itself possesses. The dominant aesthetic quality of an isolated building is that of mass, and in rural design one of the major problems is to relate the mass to the landscape. In town design the problem is to relate many buildings to one another; in so doing the emphasis in design shifts from the problems of mass to the problems of the spaces created by the buildings. Thus a row of houses (Fig. 24) appears more as a flat two-dimensional façade placed against a flat floor plane than as a three-dimensional building. The strong

FIG. 25 Wilton.

FIG. 26 Blanchland, Co. Durham. *Aerofilms Ltd.*

horizontal lines of the eaves and the base of the wall vanish in perspective in one direction only, and a sense of enclosure begins to be created. If there is another building at right angles to the row (Fig. 25) the vanishing perspective lines of each building are stopped by the other, and the sense of enclosure is strengthened. The design of the space formed by the buildings thus becomes as important aesthetically as the design of the building themselves, and the space, although it cannot be seen, becomes another of the raw materials of design. The spaces formed in this way within the building groups should be just as significant as the pattern of open spaces designed for recreation.

THE SENSE OF URBANITY

When buildings are arranged to form spaces, it is possible to obtain that intimate and urbane quality which characterizes so many of our old towns and villages (Fig. 26). We pay lip service to these traditional compositions, and we form societies to protect them, but we continue to ignore just those aesthetic factors upon which their significance largely rests.

With the usual pre-war semi-detached development the buildings were too short and the gaps between them too numerous for the spaces that were formed by them to be significant; the development was sub-urban, neither town nor country (Fig. 27). If, however, the houses are built in terraces and grouped so as to form designed spaces we can recapture the lost art of town building, and, just as important in another context, the higher density of development will result in saving many acres of land. This does not imply a return to the dreary waste of roads and buildings that characterized development in the second half of the nineteenth century. Trees and flowers

FIG. 27

FIG. 28 Hampstead Garden Suburb.

can be introduced into the spaces as part of the design, and above all, the contemporary system of organic layout will contrast the tightly built-up areas with broad landscape compositions. The Garden City movement brought back growing things into the town (Fig. 28), but in the process the town lost its characteristic urban quality. The task now is to combine and contrast this urban quality with the natural qualities of the landscape.

MIXED DEVELOPMENT

A neighbourhood will gain variety through the contrast between the building groups and the landscape, but in the housing units themselves the environment will, if it is an urban one, be largely dominated by the dwellings. In consequence, variety is needed in their forms if the appearance of the area is to be interesting. Most of the dwellings will be houses with private gardens in blocks two storeys high. However skilfully such blocks are arranged and however much variety may be introduced into the design of the individual dwellings, the development will tend to be dull because of its sameness of character and the sameness of the building masses. Buildings with quite different formal qualities such as blocks of flats, maisonettes and bungalows are needed to provide contrast.

Most people believe that the flat is not a satisfactory form of dwelling for a family with young children, but in a community of any size there will be some families without children who will prefer to live in a flat and will not want to be bothered with a garden. Indeed, the percentage of families without children and of only two or three people is surprisingly high, and it is obviously extravagant to house people in two- or three-bedroomed houses when all they want is a two- or three-roomed flat. The choice is not confined to flats or houses. The four-storey maisonettes with private gardens for each family recommended in the Housing Manual, 1949, can be a satisfactory alternative and maisonettes can be combined with flats in a single block, as has been done at Lansbury (Fig. 29).

All kinds of dwellings are needed, each appropriate to the type of family it is to house.

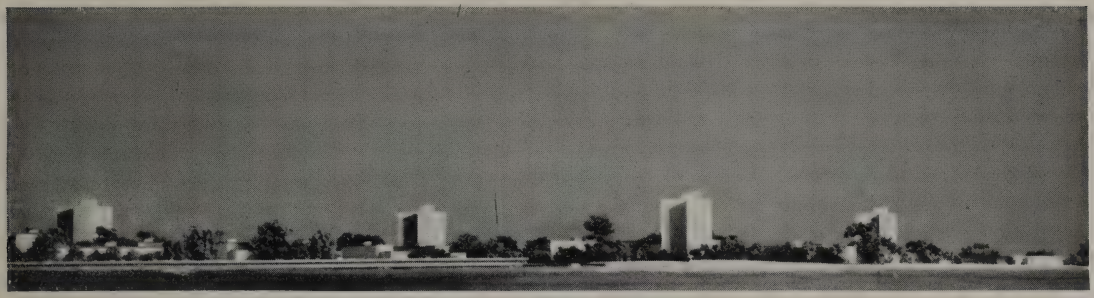
FIG. 29 Lansbury, Poplar. *Norman & Dawbarn, Archts.*

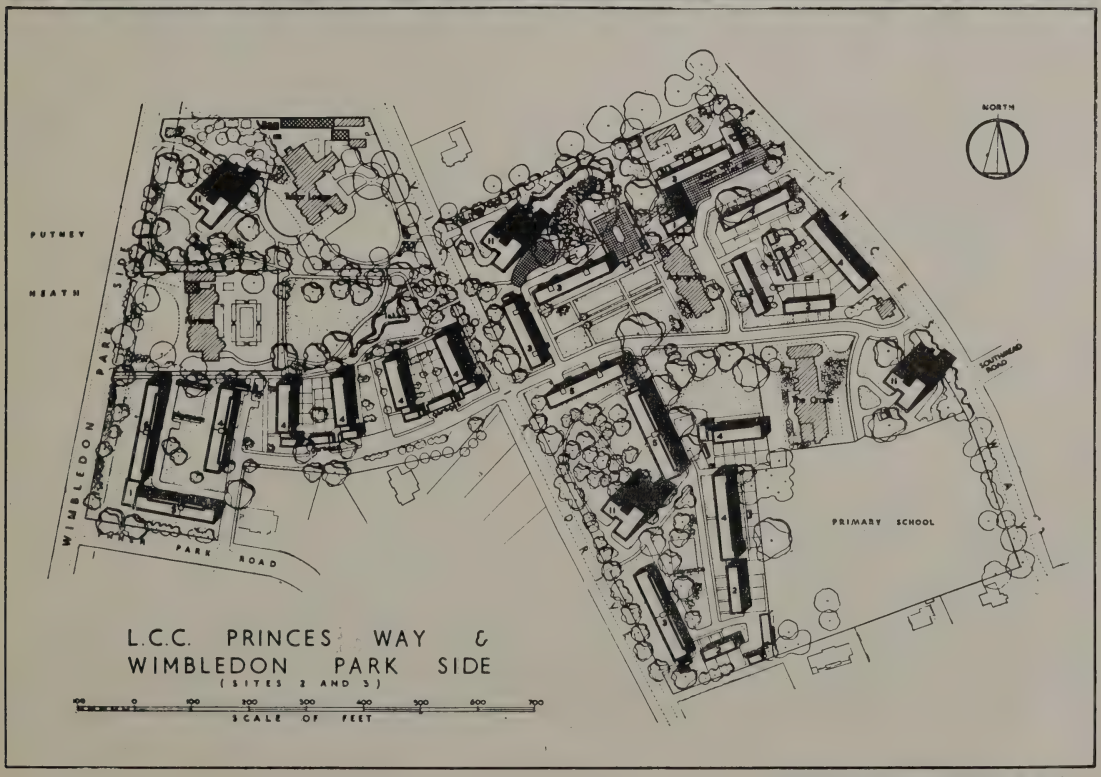
If the resulting building forms are mixed it is possible to obtain great interest in the contrasts between the spaces, the masses and the silhouettes (Fig. 30). Blocks of flats, in particular, can have fundamentally different forms from terraces of houses, and can be treated quite differently because they can stand freely in the landscape.

Carried to its logical conclusion, mixed development means planning a whole series of compositions with variety in each and unity with the whole. It is not just a question of stopping one kind of development and starting another, but of mixing the building types together in such a way that each is related to its neighbour and to the scheme as a whole. The form, colour and texture of each building do not belong to it alone, but to the group as a whole—as in the Somerford Estate, Hackney, illustrated on page 58.

FIG. 30 Wimbledon Park Side →

The layout shown is subject to amendment resulting from variation of the height of the central tower block.





Robert H. Matthew, Archt. to L.C.C.

CHAPTER II

THE ARRANGEMENT OF THE AREA

THE NEIGHBOURHOOD PLAN AND ITS LIMITATIONS

The purpose of the neighbourhood plan is to lay down a broad pattern or framework, related to the town as a whole, within which the design of each housing unit or individual building, such as a school, can be subsequently worked out in detail. The three major patterns of landscape, building and circulation should be interwoven into one cohesive design, which will determine the major aesthetic effects such as the contrast between a group of buildings and an open space, or the distant prospects of an important object. The plan should not become too much involved in detailed layout, otherwise it will become confused, its structure will be enfeebled and subsequent detailed design will be hamstrung.

The plan prepared for the Mark Hall Neighbourhood at Harlow (Fig. 31), shows how far a neighbourhood plan need go. It will be seen that no buildings, other than those forming a major focal point, and no development roads are shown. Each of the shaded housing areas, and each building group like the schools and the shopping centres, are worked out at a later stage within the broad framework of the plan, which holds them all together as a unified composition.

THE CHARACTER OF THE SITE

After the preliminary survey has provided the necessary technical information, the designer's first task is to learn the visual characteristics of the site. Armed with maps, a camera and a sketch book, he will walk over the area, noting its features and generally getting the feel of the land, so that it can make its contribution towards the character of his design, instead of being blotted out for all time, as has so often happened. Working between the site and the drawing board he must come to understand the shape of the land, so that the larger building groups can be fitted in as coherent masses. He will note places where buildings might be contrasted with the landscape, remembering that variety is as important as unity, and that such a contrast is the strongest available to him. He will record all the physical features worth preserving for their own sake—not only the obvious beauty spots or fine buildings, but anything which he may be able to exploit visually in his design. He will examine the possibility of emphasizing or creating distant views, both out of the site on to some feature like a church spire or in to it from the adjacent development. And, if he is lucky with the site at his disposal, he will record any broad prospects such as that over a distant landscape.

When, in this way, there is a parallel study of the site and the solution of the problem on paper, there is every chance that the resultant pattern will be unique. This process is diametrically opposed to the all too common practice of superimposing some theoretical pattern on the landscape, and may be distinguished from it by the term ' organic layout '.

LANDSCAPE DEFINITION

In such a layout it is likely that a landscape design can be devised which will bind the neighbourhood together as a cohesive whole and distinguish it from others, both in its internal character and in its boundaries. Even if the architectural character of adjacent neighbourhoods is different, it is still necessary to get sufficiently broad stretches of landscape, or visual obstruction from growing things, to prevent their coalescence. This does not, of course, mean simply colouring some large areas green on a plan, labelling them ' landscape ' and leaving it at that. Land is a valuable commodity and the designer must

FIG. 31 Harlow : Mark Hall and Netteswell Neighbourhoods. *Frederick Gibberd, Archt. Planner.*

make proper use of it. For instance, it is often possible to divide one neighbourhood from another by tongues or wedges of farmland, tree belts or streams, or to design the main town roads between the neighbourhoods as parkways. Again, large open spaces like secondary school playing fields, if sited between neighbourhoods, will help to distinguish one from another.

The designer should make it possible to see where the building groups end and the landscape starts. A compact and urban type of building side by side with stretches of natural landscape will, by the contrast provided and the greater cohesion in the design, make an altogether finer environment than the more usual periphery of low-density development. This does not mean, that the design should be forced out of balance in the interests of demarcation; for example, a ring road which is laid down simply to form an 'urban fence' is inept unless it really functions as a traffic ring.

The landscape design is more than a mere matter of the preservation of existing features and the definition of a few playing fields; it must become a positive design which is both a work of art in itself and an integral part of the development as a whole. The landscape architect's special knowledge of plant ecology, and his trained sensitivity to the formal qualities of plants, are seldom invoked in this country, but without them a wholly successful design is unlikely.

BUILDING GROUP PATTERNS

The general tendency in the design of the pattern of building groups is to place the Primary School near the heart of the neighbourhood, and the shopping and community centre on a major residential road leading towards the main exit. This arrangement ensures that children going to school move away from the main town roads on the perimeter

towards the quiet core of the neighbourhood, while as many people as possible pass the shopping and community centre when leaving the area. But this is only one of many theoretical patterns; in a very small neighbourhood it may be desirable to place the centre and the school together; in a large one, a subsidiary shopping centre may be required and placed alongside the school; in another case the neighbourhoods may converge on to one major centre, placed in the form of a cluster at an important road junction, as in the Mark Hall plan shown on page 27.

A site will be chosen for the school which is reasonably level and protected from wind, and where the form of the building can be contrasted with the landscape and with the adjacent houses. It is generally of value to arrange the school playing field (and any other open spaces in the area) in a position where houses can be grouped to overlook it; the buildings help to define the space, and the space is pleasant to look at from the buildings.

If, as has been suggested above, the pattern of the building groups is integrated with those of the landscape and the circulation, it is likely that there will be considerable variation between the size and shape of the housing units that go to make the neighbourhood. If these units are too large they will be dull in appearance and their character will become too diluted; if they are too small they will not ' tell ' and the visual effect of the neighbourhood may be scrappy. The author has found that a unit of between 200 and 500 dwellings can produce most satisfactory aesthetic results, and is a reasonable size for the architect and building contractor to handle.

The landscape may be used to help the subdivision of the neighbourhood into housing units. Physical features like tree clumps, land which is unsuitable for building, allotments and other spaces, can all be used for this purpose, but it is probably most undesirable to subdivide the neighbourhood by chains of open space in the same way as one neighbourhood may be separated from another. Narrow landscape wedges, strays and the like can make pretty paper patterns, but in practice they can easily disintegrate into untidy waste land and can be costly to maintain.

FIG. 32

The change in character between one housing unit and another will be obtained largely by architectural means, and the designer must do all he can to delineate areas which are capable of being laid out as cohesive units. In particular, the perimeter of each area must be such that it is possible for the architect to produce an architectural boundary of sufficient distinction to separate it from its neighbours. Some of the methods of doing this will be examined later.

CIRCULATION SYSTEMS

The contemporary neighbourhood road pattern is designed to an organic system in which the traffic builds up in volume and in speed the further it is from the heart of the neighbourhood. Inside the housing groups the roads will have little significance and may even dissolve into access paths, but as they reach the perimeter of the neighbourhood they increase in width and in scale until, when joining the main town roads, they become a dominant element in the design. Figs. 32 and 33 bring out the difference between this system and the old

FIG. 33 Mark Hall North Neighbourhood, Harlow.

pattern of a more or less even scale; in the first example, an even width between the houses is sustained over the whole site, but in Fig. 33 the pattern increases in breadth with the importance of the road.

The roads shown in the neighbourhood plan should be limited to those which link the housing units to one another, to the centres and to the main town roads. Since every neighbourhood will have unique topography and, it is to be hoped, unique building groups, it will also have a unique circulation system. All that need be said of its pattern is that it is likely to be most satisfactory when there is a major residential road, larger in scale than the others, which connects up the principal elements. Such a road will give the neighbourhood structure: from the aesthetic point of view it will bring about changes of scale and character, and functionally it will help people to find their way. The roads feeding each housing unit will be linked to this spine road, and will in their turn form the backbone of each unit.

Since the lines of the roads will be adjusted to the topography (to avoid "cut and fill" and to bring out the form of the land), they are likely to take smooth and flowing curves. Even if the site is quite flat, it may be desirable to introduce some curvature to contrast with the rectangular houses, and to make more interesting viewpoints. There may also be instances where the direction of a road should be changed simply to bring some feature into view.

It is important to recognize that a road with embankments and cuttings assumes a three-dimensional quality, and that the design of its horizontal and cross sections goes beyond road engineering into aesthetics: collaboration is needed between the road engineer and the designer of the neighbourhood to get a satisfactory appearance.

Since the best route for pedestrians is seldom the best for wheeled vehicles, and vice versa, it may be desirable to delineate pedestrian ways, linking up the housing units with the primary school and other elements where the pedestrian should have priority. But these ways should not be allowed to develop into a complicated system of landscaped walks. Use should be made of the normal footpath system within the individual housing groups, and the walks will be pleasanter when they make use of natural features; for example, when skirting a playing field, or running parallel to a tree belt.

FIG. 34 The Lawn, Harlow. *Frederick Gibberd, Archt.*

DESIGN FOR SPEED OF MOVEMENT

The speed at which the scene is viewed is an important and new influence on appearance. The citizen travels about the town at speeds varying from two to thirty miles an hour or more, and the kind of view that he has at these two extremes is vastly different.

Walking has the advantages over riding in a vehicle, that the means of propulsion and the possibilities of accident can be ignored—a head-on collision between two people in a day-dream is a rare phenomenon! The view can therefore be given greater attention and can, if necessary, be absorbed without distraction. Design associated with walking can thus be intimate and small in scale. For the most part, it will be the province of the architect and the landscape architect, but it must not be lost sight of in the neighbourhood plan.

The main town roads are, on the other hand, paths of comparatively rapid movement from which a series of views unfold themselves in continuous and even sequence. The faster the movement the less detail is observed and the bolder should the scene be painted. Just as the designer will for technical reasons increase the scale and breadth of his road design with increasing speed and volume of traffic, so should the layout be designed to produce bold and simple scenic effects.

For instance, it was desired as part of the policy of mixed development to include a ten-storey block of flats in the layout of the Mark Hall Neighbourhood at Harlow, and this was placed so as to form an integral part of the design of a future major road (Figs. 33, 34). Driving along this road there will be a general impression of low buildings divided up by woods and tree clumps until the silhouette is broken by the tall block which will suddenly come into view in a gap in the development and will as suddenly fade away.

CHAPTER III

STREET PATTERN AND PICTURE

HOUSE-TO-ROAD RELATIONSHIP

It was suggested in the first chapter that the dwellings might be arranged to form spaces which are as significant as the buildings themselves, and in which both the spectator standing in the space and those living in the surrounding dwellings are given the sense of being in a place with its own individual character.

In an arrangement of houses to form a street picture the two chief elements are the horizontal plane, formed by the carriageway and pavement, and the vertical planes formed by the house façades. It is an obvious and simple principle that these two planes are likely to be more completely united the closer they are together. Failure to observe this principle strikes at the root of the unsatisfactory appearance of many pre-war housing estates. For instance, the two planes are scarcely united at all when the house stands back from the road and is separated from it by the visual barriers of hedge and front garden (Fig. 35). When the view of the façade is only obstructed by a low wall (Fig. 36) the planes are much better united; and if all the front walls and fences are swept away and the space between the pavement and the house is designed as a communal front lawn, the composition will be even more complete. Innumerable objections are still made to the communal front garden, but its problems have been solved in America and Canada, and in this country, besides the shining example of Welwyn Garden City, it has been used in several post-war housing schemes. No one can doubt that its appearance is immensely superior to that of the enclosed front garden and it is to be hoped that more authorities will adopt this form of development.

The communal front lawn can be developed into a landscaped area in which the houses and the road are related to one another through the landscape design—for example, in many low-density housing areas, the dissimilar forms of the buildings are held together by a carefully designed planting scheme (Fig. 37). But although there is a place for such layouts, it is suggested that, for both economic and aesthetic reasons, the general trend in design should be towards high-density housing groups contrasted with broad areas of landscape. This means that the house-to-road relationship must be closer rather than wider.

FIG. 35

FIG. 36 Crawley. *Goodman & Kay, Archts.*

Studio Lisa.

FIG. 37. Sherrards Wood, Welwyn Garden City.
Louis de Soissons, Archt.

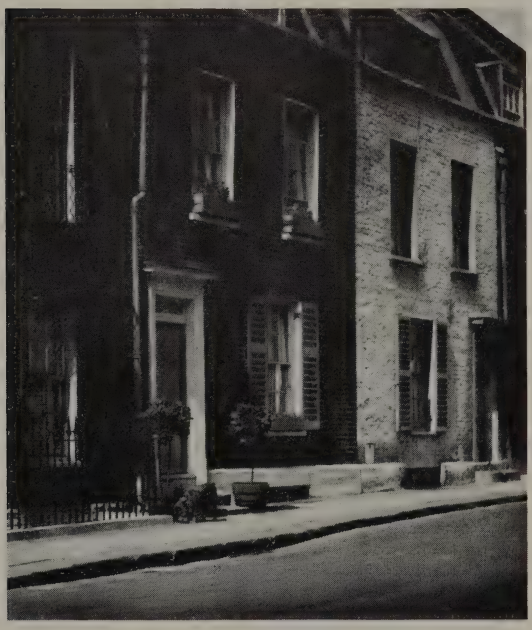


FIG. 38 Lawrence Street, Chelsea.

Diminution of the space between the house and the road tends to preclude the planting of full-size forest trees and large shrubs, and puts heavy wear on the grass surfaces. In consequence, extensive landscape gardening cannot be used to form urban street pictures. There is no reason why it should be so used, for (and this is an important proposition) the fusion between the dwelling and the road will be greater if the horizontal surfaces against the walls of the dwelling are hard and natural things are suppressed (Fig. 38). Similarities in the texture and pattern of the two planes appear to give them greater affinity than if the floor plane was grass. But this does not imply that all growing things must be excluded from the urban scene. We need trees and grass both for their own sakes and to give contrast to the forms of architecture, but they should not be so ubiquitous as to destroy that feeling of urbanity which can be obtained through the close juxtaposition of the wall and floor planes (Fig. 39).

HOUSE-TO-PAVING RELATIONSHIP

To be satisfactory, a street composition should give some appearance of rest ; but the strong horizontal lines of the kerb, pavement and verge tend to dominate the other elements and, in so doing, to destroy the repose of the composition. If, however, the carriageway is narrow, the pull of the road lines can be counteracted by setting up lines at right angles to them. For example, the verge can be omitted and the paths leading up to the dwellings designed to give a visual link between the road and the house façades. If, further, these paths are arranged to form a continuous pattern with the public footpath, the link will be stronger and the appearance will be still more restful (Fig. 40). The lack of continuity between the public footpaths and those leading up to the dwellings is one of the saddest results of separating road and house design. Fig. 41 shows a typical example in which there are two distinct and independent patterns with a strong line between them, instead of the continuous plane of the previous example.

There are occasions when it may be worth arranging the main lines of the floor and wall planes to correspond, in order to give still greater affinity between them. At the Somerford Estate, Hackney (page 58), the floor of one of the closes is laid as a pattern of asphalt and concrete paving slabs to correspond with the wall and window pattern of the houses. The eye is led across the floor plane and up the

The Manor Studio,

FIG. 39 West Norwood, Lambeth. *Booth & Ledeboer, Archts.*

FIG. 40 Kites Close, Crawley. *A. G. S. Fidler, Archt.*

FIG. 41

FIG. 42 Pekin Close, Lansbury. *Bridgwater & Shepheard, Archts.*

walls, to be stopped by the horizontal line of the eaves, while in the opposite direction it is stopped by the flower boxes placed near the kerb. When there is no carriageway, as in Pekin Close, Lansbury, the floor pattern can stretch right across the space to be picked up by that of the houses on the opposite side, thus bringing all three planes into visual relationship (Fig. 42).

RELATIONSHIP BY SIMILARITY OF FORM OR CHARACTER

The first principle in relating houses in a row to one another is that the greater the similarity of their forms, the greater will be the cohesion between them. Because their forms are identical the pair of houses on the right of Fig. 44 have more affinity to each other than the pair on the left. There is some affinity between all four houses because their masses are much the same, but nothing like as much as in a row where each house is identical (Fig. 45). This principle of relationship by similarity of form will be obvious to many and is only mentioned because of countless examples of failure to recognize it—the low-pitched asbestos roof against the steeper tiled one is typical (Fig. 46).

It is possible to obtain cohesion in design through similarity in the character of the buildings, even though their forms may differ. For example the houses in many old villages are of very different shapes, but hold together as a unity because they were built of local materials in a common vernacular. We have no such traditions today, and the only instance where differing forms are likely to be resolved by character is where they are designed by one architect, because in this case they will have the common imprint of his personality. Thus the dwellings shown in Fig. 43 are very different in plan and elevation, but do make a group because each is formally reminiscent of its neighbour. This is an example in which the dwellings are widely spaced; when they are close together the character relationship by itself will be too weak, and other methods will have to be adopted to link them together.

FIG. 43 The Lawn, Harlow. *Frederick Gibberd, Archt.*

FIG. 44.

FIG. 45 Hatfield. *Hon. Lionel Brett, Archt.*

FIG. 46

FIG. 47

FIG. 48 Northolt. *Frederick Gibberd, Archt.*

FIG. 49 Lansbury. *Bridgwater & Shepheard, Archts.*

FIG. 50

RELATIONSHIP BY RHYTHM

The visual relationship between identical houses in an even row is not only due to their similarity of form, but also to the similarity of the spaces between them. Both the forms and the gaps set up a rhythm which leads the eye in an even progression along the row. This relationship hinges on the treatment of the gaps, which must not be so wide that the eye will not easily bridge them. On the other hand, the buildings must not be so near to each other that only a narrow glimpse is obtained of their end elevations, as this tends to give the appearance of a terrace with deep gashes in it (Fig. 47). A narrow gap may also make a rather strong vertical emphasis which, by conflicting with the horizontals, may disrupt the unity of the composition. Ten feet is probably the minimum distance apart of the blocks if the full height of their end elevations is exposed; a reasonable amount of the gable or hip can then be seen in perspective and the gap is not too narrow when the houses are seen head on across the street.

As rhythm is so dynamic a characteristic, there is a danger that it may become so strong as to destroy the repose of a design. Thus a plain house and gap arrangement seldom makes a really satisfactory picture, because the break between each building is so abrupt that the rhythm tends to be jerky. It may succeed if the street is narrow, because the buildings can only be seen in sharp perspective—which closes the gaps and makes the horizontal lines of the façades run into each other—but when seen across a wide street or an open space, the unpleasant ' tooth and gap ' effect becomes pronounced.

If small houses cannot be combined into terraces, it is usually best to reduce the gaps between them by ground floor links, like screen walls, sheds or garages, which can give continuity to the façade and make the silhouette less jerky (Fig. 48). The nearer the latter is to an unbroken horizontal line the greater will be the repose of the design. In this connection, it is interesting to note the linking of semi-detached pairs of houses at first floor level, the effect being a compromise between the terrace and the semi-detached forms (Fig. 49).

The normal house and gap arrangement nearly always fails when the dwellings are built on a slope, because the silhouette is so irregular that no obvious rhythm is set up (Fig. 50). One of the pleasantest and simplest solutions to this problem is to place each block at an angle to the road with the end façade roughly along the contours and arranged so that it is revealed to the observer as he climbs the slope. This has the effect of stressing the horizontal base line of the end elevation and the silhouettes of the roofs which climb above each other in an ordered progression (Fig. 51).

FIG. 51 Harlow. *Frederick Gibberd, Archt.*

RELATIONSHIP BY CORRELATION OF FORM

Buildings may also be related to one another by being designed so that each recognizes the form of its neighbour, and, instead of being an independent architectural composition, is but part of a wider one. Thus the houses in Fig. 52*b* have greater unity as a street picture than those in Fig. 52*a* because the horizontal lines of the roof planes give a stronger visual link from one dwelling to the other, and because porches and chimney stacks on adjacent houses begin to be associated with each other.

Pairs of semi-detached houses are such small units and the gaps are so frequent, that a very strong rhythm is set up which will hold the design together without a great deal of correlation (though the more the better) ; but with longer buildings and less frequent gaps there is far greater need for formal correlation. A common arrangement for a long terrace of houses is to have projecting wings at each end as visual stops and to bring the eye back to the centre line. This arrangement works quite well if the terrace occupies the whole length of the street, or if it is one side of a rectangular close when the projecting wings acknowledge the presence of blocks at right angles to the terrace (Fig. 53). But two such terraces placed side by side (Fig. 54*a*) disregard each other and there is little unity between them. If, however, they are re-designed as in Fig. 54*b* the composition becomes more complete.

Fig. 51 shows a case in which each terrace has been designed asymmetrically and is almost completely dependent on its neighbour for the realization of the composition. The blocks are

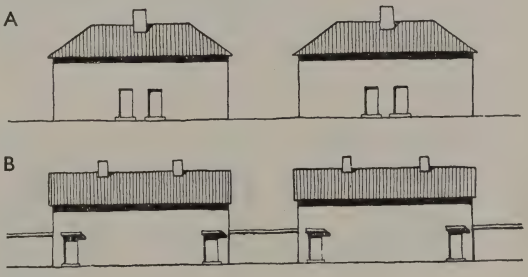


FIG. 52

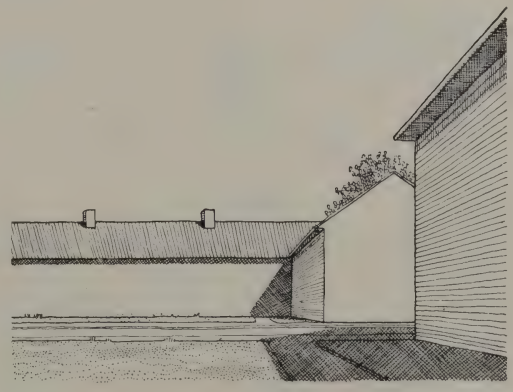


FIG. 53

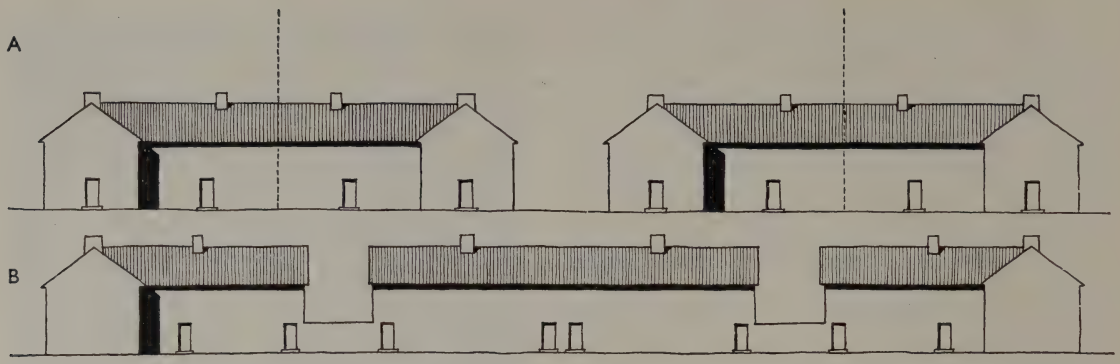


FIG. 54

at an angle to the road, which both curves and climbs a gentle slope. Looking along the street in one direction there is correlation from the repetition and even rhythm of the end façades and in the other through the lines of the weather-boarding leading the eye from one block to another. These elementary examples knock on the head any idea of just filling up a site with standard dwelling types. If there is to be satisfactory correlation between one block and another, each housing group or street will require its own particular solution. This means a deal of trouble and sensitive design, but it is only in this way that housing layout can become significant.

BUILDING LINE PATTERNS AND RECESSIONS

Many attempts have been made to avoid monotony and to introduce variety into long streets of small houses by varying the building line. No building line pattern will, however, have much significance unless it is designed to help in setting up a rhythm or to create purposeful recessions in the street façade. The visual interest in a varying building line is created by the view of the return façade of the projecting building, and it is obvious that the set-back must be large enough for this façade to be seen properly. Even then the building line pattern will have little significance unless the foreground is cleared of fencing and hedges which mask the façade. A small set-back only confuses the design (Fig. 55*a*) ; and with short blocks, like semi-detached houses, even a larger set-back tends towards restlessness and confusion, particularly in silhouette (Fig. 55*b*).

It might be worth while to set back alternate blocks if they are of some length and of simple form, in such a way that the end elevations of the projecting blocks form points of interest down the street (Fig. 55*c*). Recessions thus formed can be very effective in a one-sided street, but in a normal street they generally need to be designed in relation to those on the opposite side, so as to form a pattern of spaces.

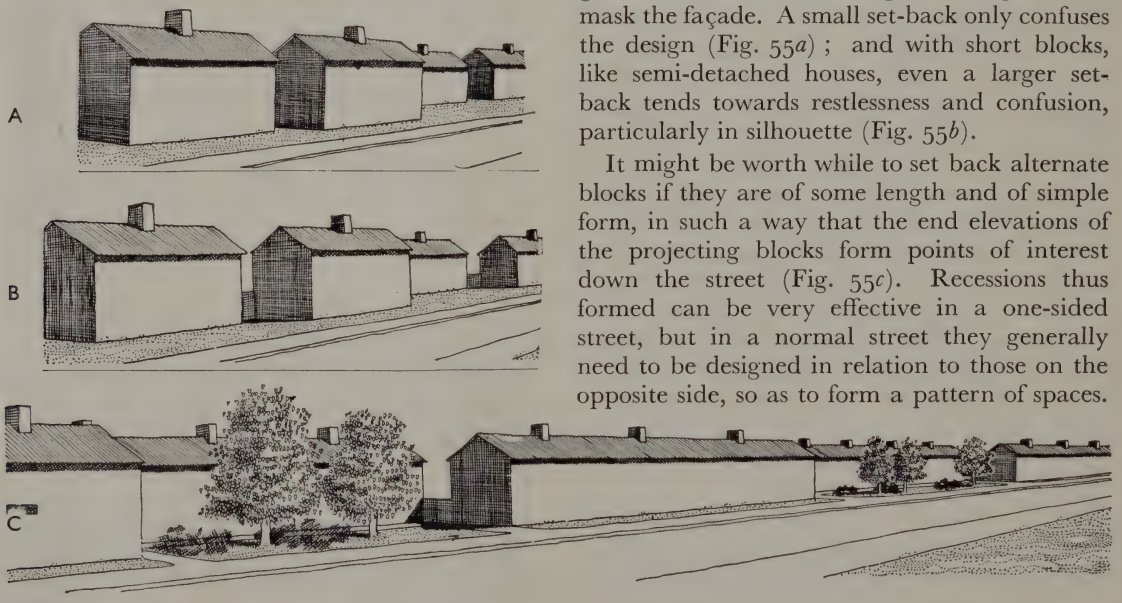


FIG. 55

FIG. 56 Huntingdon. "*Country Life.*"

THE STREET AS A FAÇADE

In all the foregoing examples it was assumed that the buildings were in comparatively short lengths, and that the composition of the street as a whole was dependent for its unity on the similarity of the forms of the buildings, on rhythm, on their correlation, or on combinations of these qualities.

The average house of today is so small in scale and in its details, and is so standardized in its plan forms, that it almost always gains in appearance when converted into terraces. Indeed, it is now generally accepted that a layout of short terrace blocks, because of their greater simplicity of form and silhouette is likely to look better than one composed solely of detached or semi-detached houses. But so great is the prejudice against the terrace that we seldom have the courage to go beyond a block of eight dwellings. Perhaps, some people's reaction to the long terrace may be that it is a return to the monotony and dreariness of nineteenth century slum building; but it does not preclude the introduction of natural things and there are, moreover, lessons to be learnt from the eighteenth century—a far more significant period of town design—when the long terrace was used almost exclusively. Most of us admire housing groups like that shown in Fig. 56 in which all the buildings are strung together in one continuous block. Perhaps it is that our attitude to examples such as these is so clouded by sentiment that we do not recognize that they can have practical application today.

The terrace has no technical defects—sound insulation and access to the rear gardens present no real difficulties—and the continuous façade has an aesthetic advantage over a series of blocks simply because it is continuous. The façades merge together as one flat two-dimensional plane, there is no problem with the gaps between the buildings, and since there

FIG. 57 Dedham. "*Country Life.*"

FIG. 58 Chipping Campden. *Reece Winstone.*

FIG. 59 Beaumaris, N. Wales. *S. Colwyn Foulkes, Archt.*

FIG. 60 Harlow. *Frederick Gibberd, Archt.*

are no return façades, all the horizontal lines diminish in perspective in one direction. Even though each house is of individual design (Fig. 57) there is every chance that the terrace will hold together as a unity, which is almost impossible with several small individual units.

There seems no valid reason why terraces should be limited in length—fifteen, twenty, twenty-five or even larger numbers of houses enormously help the appearance both of the building itself and of the street picture. But this does not, of course, imply that a long terrace should be formed just for the sake of it. Its length should depend on the character of the site and the character that is aimed at in the layout. In fact, present tendencies in layout are towards grouping houses on comparatively short streets or in squares or closes, rather than on long street frontages.

On a level site a long terrace has great repose due to its strong horizontal emphasis, but unity and repose are not enough. Variety needs to be introduced through strong contrasts or a very definite rhythm. For example, Fig. 58 shows a long regular terrace of great strength and repose, which is enlivened by the contrasting forms of the projecting gables.

Variety in the individual terraces is not so important in schemes of mixed development, because the buildings are seen alongside others of quite different form; but even in such a case the appearance of the block may gain by the contrast between a long roof plane and a rhythmical façade pattern.

A terrace on the slope of a hill does not require the introduction of any special features, since the rhythm of the stepped roof line is nearly always sufficient to provide variety. For instance, the terrace in the Welsh scene (Fig. 59), is an exceedingly simple composition which has nevertheless, great liveliness through the stepped silhouette.

There is one traditional stepping device which is well worth remembering; that is to set each house in front of its neighbour to such an extent that the roof plane is continuous—the continuity gives repose and the even stepping of the façades gives contrast (Fig. 60).

THE STREET AS A SPACE

In many housing layouts each side of the street is designed as an independent composition, as if it was to be seen across an open space. Though the effect when thus seen may be quite satisfactory, the view looking down the street is often a most unfortunate duality instead of being, as it should be, a unity. The little street scene in Westminster (Fig. 61) appears so satisfactory because the observer feels that everything is made to contribute towards the total effect. The walls of the houses and the floor of the street come together to form a complete composition. The street, instead of being just a street of houses, has its own identity and the characteristics of an enclosed space.

There are two major tasks in designing a street as a space. First, to close the view down the street; secondly, to bring the dwellings on opposite sides into relationship to each other and to the road between them.

Fig. 62 shows a street in which both these factors have been ignored; the road is a broad flat plane which dominates the scene and splits it into two, and, since there is nothing to close the view the eye is led on to infinity. The effect is of two independent façades facing an open space of infinite length.

Fig. 63 shows the obvious solution to the problem of closing the view down the street, that of placing a dominant building at the end. The use of such terminal features was a characteristic of many early housing schemes, but it can lead to dreary radial planning and be very dull for those living in its long straight streets. The most should be made of the views of any interesting buildings, but it is not at all necessary to confine them to the centre lines of a road system.

The opposing buildings in a street can bear no relationship to each other if, as is quite common, the road space is too wide and the carriageway too dominant. Though we build cheaper and lighter carriageways than our predecessors, there is still a tendency to keep the houses too far apart—100 or even 150 feet is quite usual—with the consequence that the height of the buildings is quite out of proportion to the width of the space and the layout is too

FIG. 61 Barton Street, Westminster.

FIG. 62

FIG. 63

FIG. 64

FIG. 65

open and draughty. The front garden or lawn space should be reduced and the design of the road simplified so that the distance between opposite façades is narrowed down. It will then be possible to relate the forms of the buildings to one another and to design the space between them as a common horizontal plane.

Thus, in Fig. 64 the houses are brought into mutual relationship by placing them closer together, by reducing the carriageway and by the floor pattern; and the view down the street is closed.

Such an arrangement will, however, break down if the road is a long one, because the buildings at the end will become too insignificant to form a satisfactory end wall to the street space, and the carriageway will become too wide. Roads which form the spine of a layout must necessarily be long, and other methods of treating them must therefore be adopted. Of these there are two broad methods: the first is to subdivide the street into a series of spaces and this is considered in the next chapter; the second is to introduce curves into the street so that its complete length cannot be seen.

Fig. 65 shows a simple curved street which, although dull, is more satisfying than those in Figs. 62-63 because of the inherent interest of the curved line and the sense of enclosure which is created.

The contemporary road system tends to take curved lines for its main structure in sympathy with the configuration of the land, thus giving opportunities for closing the view and of introducing points of interest along its length. Even on flat sites it may (short of some quite different method of planning like the cellular one) be worth introducing gentle curves to the main spine roads, simply to obtain more varied street pictures and a greater sense of enclosure. But it is not necessary to try to find a geometric basis for the curves on an irregular site, still less to force those on a flat site into obvious geometric patterns (Fig. 66). The aim should be to produce a series of unfolding pictures, each with its own interest and surprise.

The plan and pictures of the Well Hall Estate at Eltham (Figs. 67-69) show what

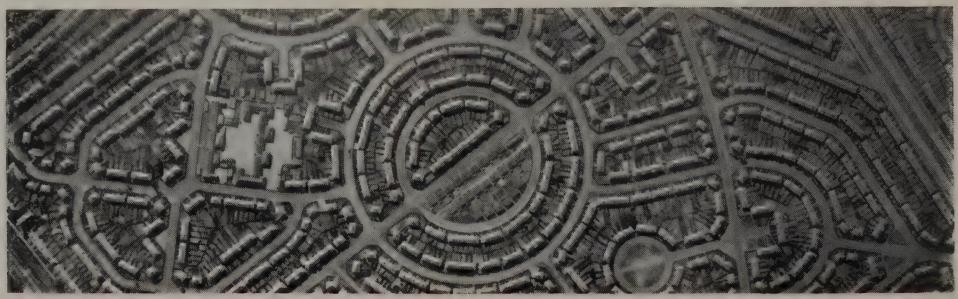


FIG. 66

FIG. 67 Ross Way, View 1.

FIG. 68 Ross Way, View 2.

FIG. 69 Well Hall Estate, Eltham, London, S.E. *H.M. Office of Works*

tremendous interest and vitality can arise from an irregular layout—although the acute-angled junctions and even carriageway widths are poor practice by modern standards. Not that this is to be taken as a recommendation of irregularity as such; spine roads generally need a different treatment from compositions based on a short length of road, which may well be designed on strictly geometric principles. The whole problem is so inextricably mixed up with the character of the site and the form of the buildings that discussions in the abstract on geometric versus irregular layout are futile.

DISTINCTION BETWEEN STREET SPACE AND GARDEN SPACE

If the street is considered as a space, the dwellings may be regarded as its walls and the road, paths and other horizontal surfaces as its floor. Behind the buildings is another space, composed of private gardens, which is seen through any gaps between the buildings. It is a characteristic of this country that the tenant can behave more or less as he likes in his back garden, provided he is not a nuisance to his neighbours. In consequence, an untidy and confused scene with little homogeneity is created, which may spoil the street picture. It is therefore necessary to screen the view of the garden space, and this can be achieved by the walls, sheds or garages which unite adjoining buildings. But at the corner of the street a wide expanse of the rear gardens will be seen unless there is some special treatment. The principle of screening between the houses on a straight road frontage must therefore be extended to the road junctions as well.

Screen walls can be interesting in appearance (Figs. 70-71) but they are costly. Many designers therefore reduce the depth of the end gardens, or arrange the buildings themselves to act as screens, as when garden sheds are placed on the return frontage, or when houses are placed diagonally across the corner. Devices such as these occur frequently in the work of Raymond Unwin and his followers, and although it is commonly supposed that their purpose was to make the cheapest use of the road frontages, anyone who troubles to read *Town Planning in Practice* will realize the great importance that was placed on them simply for aesthetic effect.

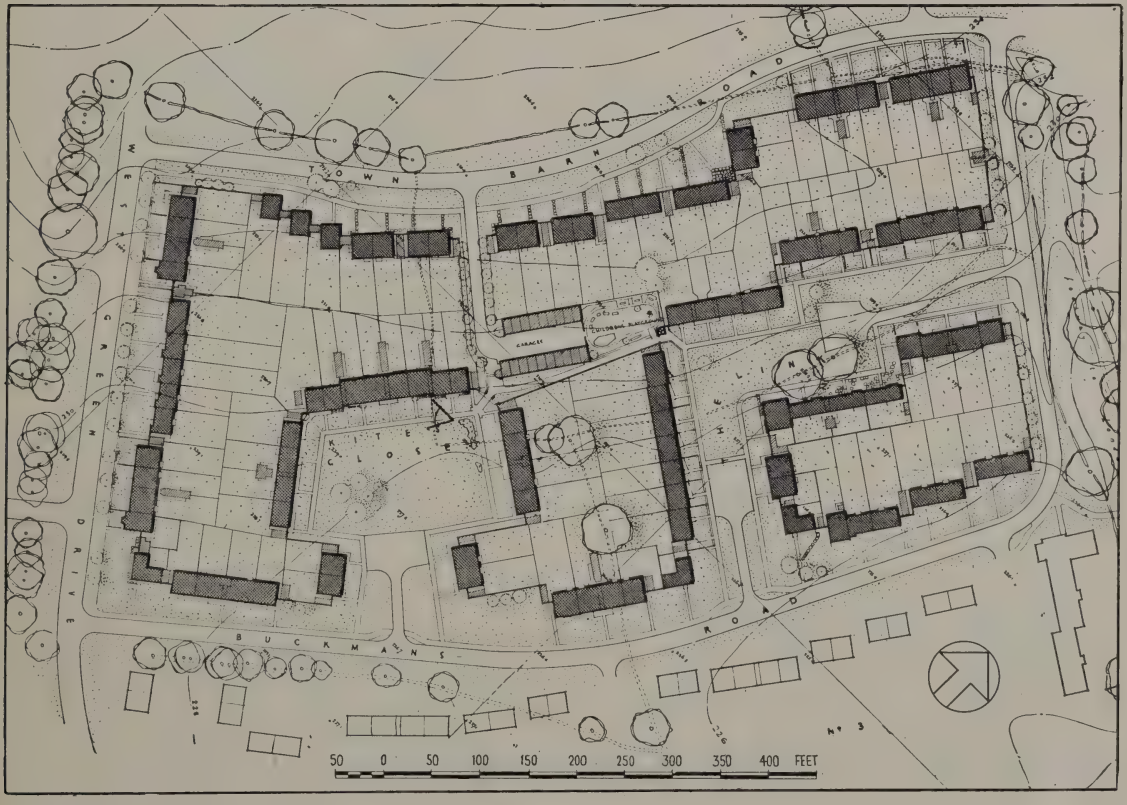
When all the rear gardens are screened from view there are two types of urban space, the street space enclosed by the front walls of the buildings and the garden space enclosed by their rear walls. Many designers accept the distinction between these two types of space, and although attempts have been made to obtain freer layouts by fusing them together, few have succeeded.

In Europe, particularly in Scandinavia and Switzerland, the private garden is often brought into the general picture, but in this country, unless the tenant is willing to give up the idea that his garden is a private space and unless those in authority are willing to spend more money on landscape design, it is probably best to shut the rear gardens out of the street picture (Figs. 72-73).

FIG. 70 Coventry. *D. E. E. Gibson, City Archt.*

FIG. 71 Crawley. *A. G. S. Fidler, Archt.*

FIGS. 72-73 Kites Close, West Green, Crawley. *A. G. S. Fidler, Archt.*



CHAPTER IV

SPATIAL LAYOUTS

SPACES FORMED IN THE STREET

The common methods of forming spaces with small houses are to make recessions in the length of the street, to group the buildings around road intersections, to design a short length of street as a space—such as a cul-de-sac, or to form spaces or closes independent of the road system. All four methods are illustrated in Fig. 74.

The degree to which the space gives a sense of enclosure depends on how far the views out of it are controlled and how far the wall and floor planes are correlated. It is, of course, most complete in the cloister as the walls can be designed as continuous planes with the view obstructed in all directions, and it is weakest when the buildings are separated by wide gaps and bear little formal relationship to each other.

In all but very small schemes there will be a series of spaces, so that the need to give a sense of enclosure in each particular space has to be balanced against the need to link the spaces to one another.

FIG. 74 Neighbourhood Centre and part of Mark Hall Neighbourhood, Harlow.

Fig. 75*a* shows the most common type of close formed by making recessions on both sides of a street. The road divides the space into two, a defect which is even more pronounced when there is an avenue of trees. Duality is counteracted when alternate blocks are set back as in Fig. 75*b* and if this pattern is repeated in adjoining streets it is possible to maintain a constant depth of rear garden.

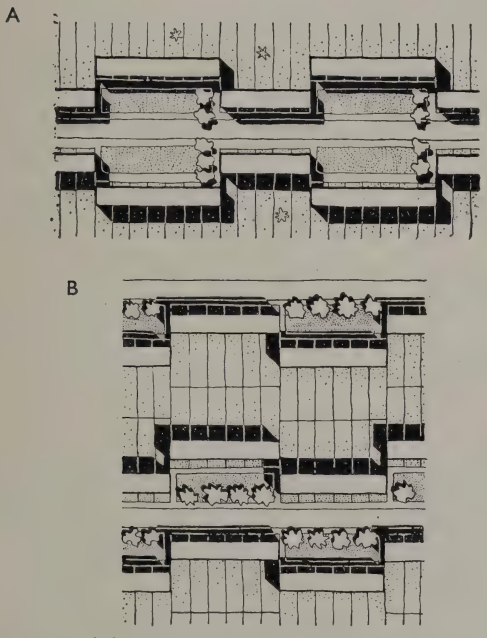


FIG. 75

Fig. 76*a* shows a variation of the rectangular close, in which the houses are inclined towards the road to form a series of fan shapes, a mirror symmetry of the layout shown in Fig. 51. Looking along the street in one direction, there is one long street picture composed of a series of receding planes, but in the other direction the observer in the street and those living in the houses experience a very definite sense of enclosure.

In Fig. 76*b* the blocks are at an angle to the road but parallel to one another. They are more independent of the road because their alignment reduces the importance of the road line and quite interesting asymmetrical compositions are formed.

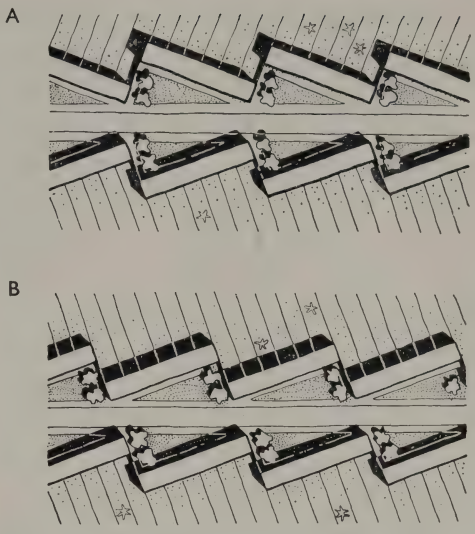


FIG. 76

In Figs. 77*a* and *b* the road is expanded into diamond-shaped spaces by the arrangement of four inclined blocks. In the latter case the horizontal lines of the buildings cut across the view down the street and thus give a more marked sense of enclosure than in (*a*).

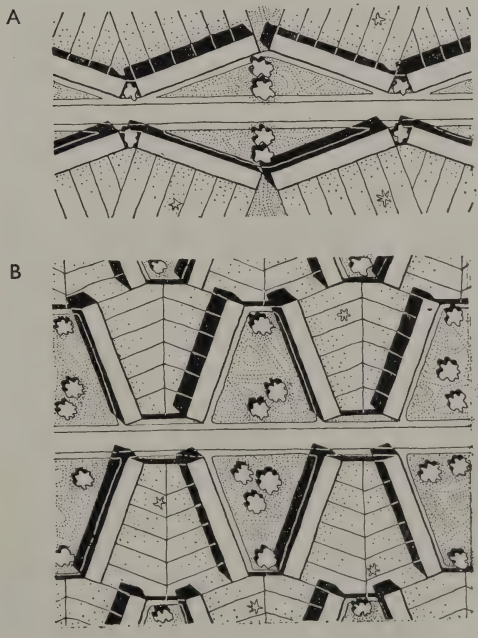


FIG. 77

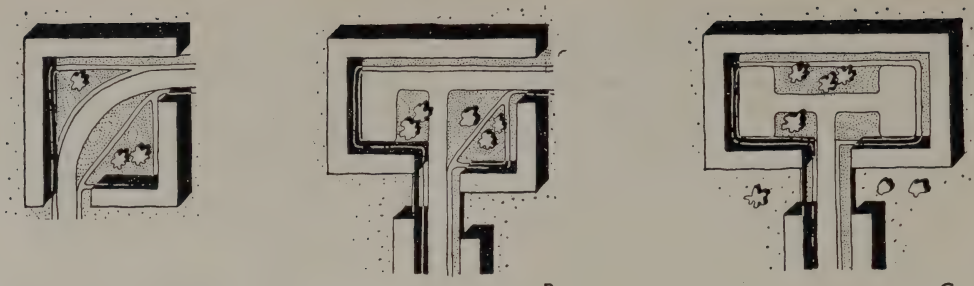


FIG. 78

All of these layouts will make a more interesting arrangement than the normal building line street but none of them, except perhaps the last, gives a very marked sense of enclosure to the spaces as the street itself has so strong a visual pull in one direction. The effect is of a chain of small loosely defined spaces, and although there are instances where such a chain may give interest to a long street, particularly a curved one, it may easily become monotonous.

SPACES FORMED ON CORNERS

It was pointed out in Chapter III that a curved road gave opportunities for placing buildings so as to close the view down the street, and so to create a sense of enclosure. This principle can also be applied to changes in the direction of a road such as in Fig. 78*a*, where a rectangular close is formed around a right-angled bend. A weakness of the design, that vehicles have to park on the curve, can be overcome by changing the bend to a T-junction, one arm of which is made a cul-de-sac enlarged for parking. The buildings are grouped round the cul-de-sac in U form and the opposite side of the space is made wider than the U to reflect the main direction of the circulation and to provide contrast (Fig. 78*b*.) The cul-de-sac can be repeated in mirror symmetry to form a ' hammer-head ', a pattern which often occurs in Garden City development (Fig. 73*c*). These last two examples are in effect formed round a T-junction, and in such a case it is important that the view from the leg of the T should be closed by a terrace of houses (Fig. 79*a*) as a short pair would look trite and give little sense of enclosure (Fig. 79*b*). The T-junction could also be developed into a symmetrical space with the terrace at the head of the T set back to allow a row of trees to be planted, the houses at each end of the terrace being brought forward in line with those on the opposite side of the road so as to emphasize the rectangular shape of the space (Fig. 80).

Other kinds of plan shapes can be developed round a T-junction. For example, a favourite device of the Garden City builders was to place blocks diagonally across the angles to form a loose triangle-shaped plan. But most of these methods were too complicated to be easily comprehended, and a rectangle is usually the best solution.

At Hampstead Garden Suburb and at many of the inter-war estates, elaborate compositions were evolved round cross-roads and other forms of road junction, but these are largely out-dated, because the T-junction is now favoured in the interests of traffic. Proposals have also been

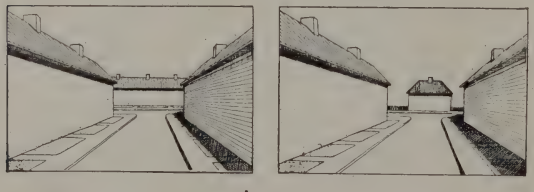


FIG. 79

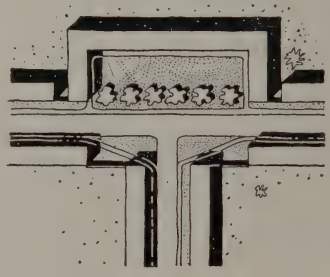


FIG. 80

made for forming elaborate architectural compositions around traffic roundabouts, but they are not to be taken seriously. A roundabout implies a heavy volume of traffic and is therefore neither suitable as the floor of a space nor as a place to live.

SPACES INDEPENDENT OF ROADS

The spaces so far mentioned are for the most part formed on the road pattern, either by expanding the road into closes or squares, or by grouping buildings round changes in its direction. In layouts of this type the road is a very important element and may even be the controlling influence in the design. But another approach to design is to regard the space itself as the dominant element, with the road only incidental to it. Instead of laying down a pattern of roads and then forming spaces on it, a series of satisfactorily related spaces is evolved and linked together by carriageways and footpaths. The main spine roads must be predetermined, otherwise the layout will lack structure; but beyond this the design can assume a very definite pattern of linked spaces or cells, each of which has its own character. The difference in approach is perhaps best illustrated by comparing the plan of part of Welwyn Garden City (Fig. 81) or the squares of Bloomsbury (Fig. 207) with the average contemporary estate (Fig. 82).

There are no great difficulties in forming cellular groups with blocks of flats, because both sides of the buildings can be used to form walls to adjacent spaces, and because comparatively few access roads and paths are needed. But far more skill is required in a layout of houses, because one wall is cut off from the space by private gardens, and the other has entrance doors with paths up to them at frequent intervals. Therefore, whilst there are many cellular groupings with flats, there are comparatively few examples with houses. Nevertheless, the tendency in design, whether with flats, houses or mixed development, is towards cellular groupings.

FIG. 81 Welwyn Garden City

FIG. 82

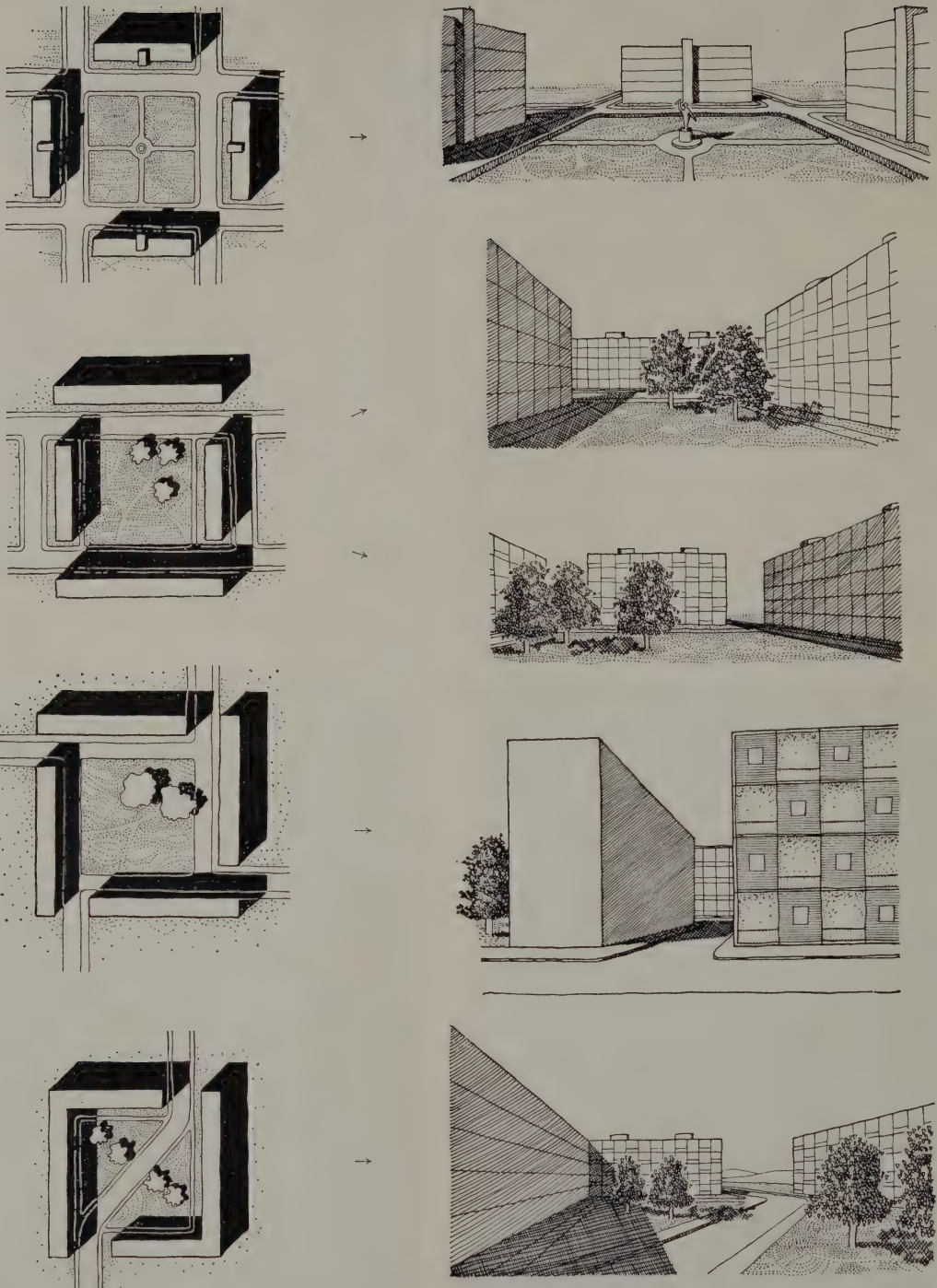


FIG. 83

Fig. 83 illustrates some common faults in spaces formed either with houses or flats. In the first sketch (*a*) the buildings are arranged on two principal axes, the lines of which are reflected in the pattern of the floor, which is thus cut up into four equal parts. Each block has a central architectural feature which concentrates attention on to the individual building and away from the design of the space as a whole. The square has roads round all its four sides which form cross roads in the corners. Apart from being bad from the traffic point of view, this necessitates such very wide gaps between the buildings that they fall apart into individual compositions.

These faults are corrected in the second sketch (*b*). The road junctions are removed from the corners of the space, which enables the buildings on the roads to be slid in front of the end elevations of those at right angles to them, thus reducing the gap and increasing the correlation of their forms. The façade of each building is designed as a simple wall to the space, and the floor, which is brought hard up against two of the blocks, is treated as a flat plane linking them together. From the road there is a view straight out of the space, which in most built-up areas will be closed by other buildings in the immediate vicinity. Fig. 83*c* shows an ingenious solution to the problem of the open corner, for, although there are gaps at all four corners the blocks are so arranged that the view is closed by the main façade of a building, whichever way one enters the space. There are numerous historical examples of this system, particularly in Italy, and it is dealt with at some length by Camillo Sitte in *The Art of Building Cities*.

In Fig. 83*d* the two opposite corners are built up so that the space is in effect formed by two L-shaped blocks. The road cuts diagonally across the space, making the plan form rather similar to a close formed about a right-angled bend, as in Fig. 78*a*. There would be some pleasant perspective views from the road, but quite the best feature of the design is that the floor can be swept up to the walls of all the buildings without interruption from carriageways—except of course where the space is so large that secondary loop roads are necessary.

The alternative to this pattern is to build up adjacent rather than opposite corners of the space (Fig. 84), which is now formed by a U-shaped block with a straight block across its open end. The U-shaped block needs to be designed as a single architectural composition, but the straight block could be of a different design to provide a contrast, though not, of course so individual that it upsets the balance of the space as a whole. Access to the U could be by a loop road leaving the centre of the space free. The carriageways should be as narrow as possible to avoid cutting up the floor plane and any attempt to treat a road of this description as if it were a full scale traffic road should be firmly resisted.

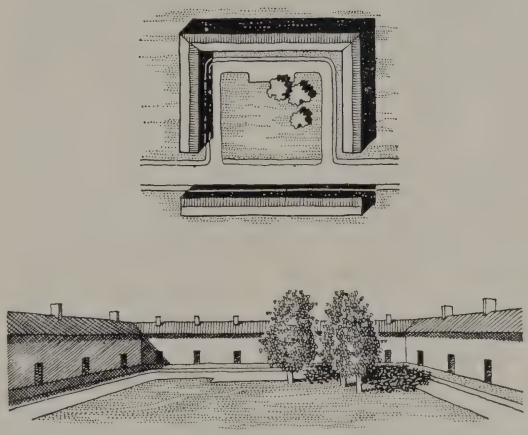


FIG. 84

When the space is deep rather than wide, a cul-de-sac can often be substituted for the loop (Fig. 85). This rectangular form makes an infinitely better space than the usual cul-de-sac in which houses are loosely grouped round a turning circle as, apart from the design being more cohesive, all the houses have a good view across the space and the shut-in feeling in the end houses is avoided. The turning area should be rectangular rather than circular, as this reflects the shape of the space and makes for a simpler arrangement of paths. Fig. 85 shows a turning space in T form with additional space for parking, and Fig. 86 illustrates an actual example of a close of this nature.

FIG. 85

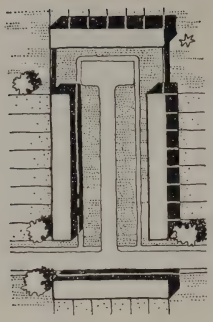


FIG. 86 Welwyn Garden City. *Louis de Soissons, Archt.*

Narrow U shapes of this character are sometimes adopted for blocks of flats of three or more storeys, but they are seldom satisfactory as the increased height of the buildings makes the space too confined and overshadowed. They are even more unsatisfactory when the heart of the U is planned as a service yard.

Two U-shaped blocks can be placed opposite to each other to form a rectangular close with all four corners built up (Fig. 87*a*). The space is rather similar to that illustrated in Fig. 84 and is straightforward and satisfactory. The only criticism is that the floor of the space is bisected, a defect which is least apparent when the road is placed off centre. Fig. 87*b* shows an interesting variation which gives a strong sense of enclosure. The space is formed by a straight block placed between the arms of a U block and is entered by a cul-de-sac road passing through the latter, thus providing a framed view into the space.

Another type of close with no through access is that in which a single narrow aperture is made in one side of the space (Fig. 87*c*). The absence of gaps in the corners gives the strongest possible sense of enclosure, and if a pattern of pavings is laid down to relate the floor plane to the wall planes the space will have its full significance as an entity. This plan is being tried out at Harlow (the centre square in Fig. 74) where specially designed corner flats and houses are used to preserve the continuity of the walls, one of which is pierced by a pedestrian way to give some movement through the space and prevent it from becoming a dead end.

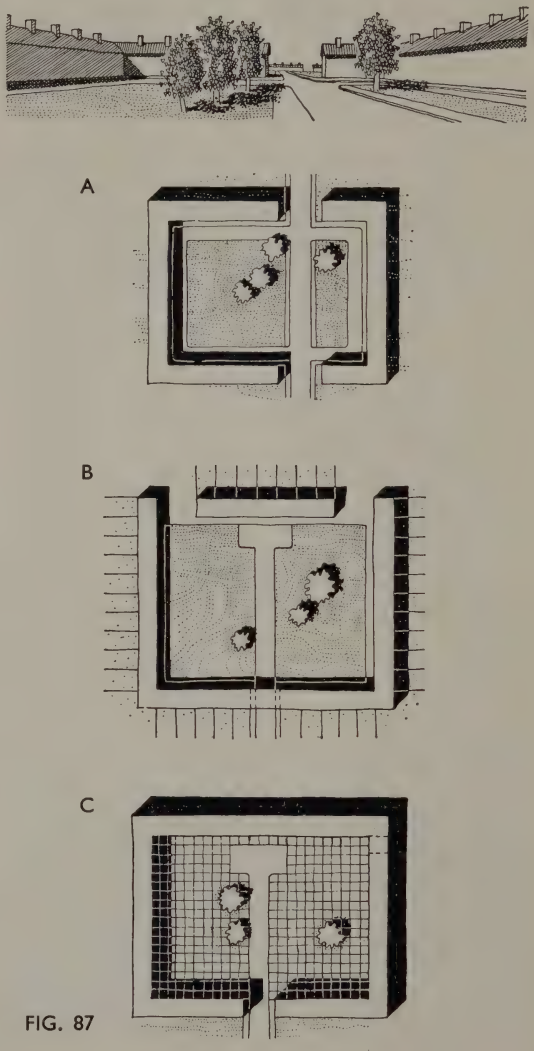


FIG. 87

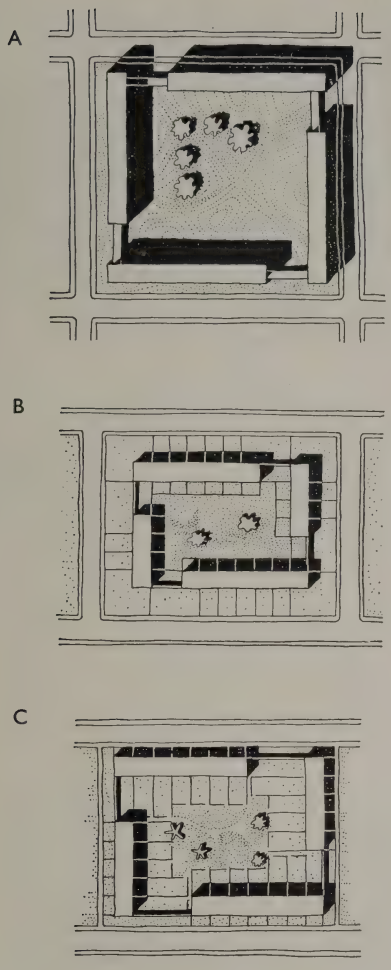


FIG. 88

A space of this kind can have a very pronounced urban character and is economical in land use, but it remains to be seen how popular it will be. It is certainly far removed from one popular conception of an ideal home—a house standing in its own grounds.

There are some who contend that the roads should be kept outside the space altogether, so that it is free of all vehicles, and so that the floor is undisturbed by carriageways—always a source of aesthetic difficulty as the kerbs, gutters and changes of material complicate the pattern. There are many examples (Fig. 88*a* is an obvious one) to show that this presents no difficulties in a layout of flats; but a single light service road will seldom destroy the character of a space and to contend that every flat layout should be in the form of a precinct would be a dangerous dogma leading to stereotyped plans, and would cripple the design of a related series of such spaces.

When houses are turned inwards to overlook a communal open space there is the inevitable problem of how to treat the private gardens. The choice in a nutshell is whether the gardens should be placed on the road side, in which case the street picture is sacrificed for the sake of the internal space, or whether they should be inside the space, in which case the latter is spoilt in the interests of the street picture. Figs. 88*b* and *c* illustrate the dilemma. Possible solutions of the difficulty are to be found in a compromise in which the gardens on the road side are reduced in size, and to compensate for this, small private gardens are placed around the internal space.

Closes formed by buildings on all four sides have the advantage over small closes formed in the street, that they can be large enough for full-size forest trees to be planted. This enables fine landscape effects to be obtained, and gives an opportunity for the maximum contrast between geometric and natural forms. However, in really large spaces, such as the Squares of Bloomsbury, the planting may be so profuse and so individual in character that the walls of the space are separated from one another, and the effect is that of a garden surrounded by roads and independent buildings. This may be an attractive form of layout, but is not to be confused with urban spaces designed as an entity in which there is a relationship between the vertical and horizontal planes.

INTER-RELATED SPACES

Many of the single space types described can be repeated to form a series of inter-related spaces in which there is both a sense of enclosure in the individual spaces and spatial links between them. Fig. 89 shows an arrangement of blocks of flats at right-angles to each other to form a series of rectangular spaces. There can be quite interesting diagonal views between the gaps,

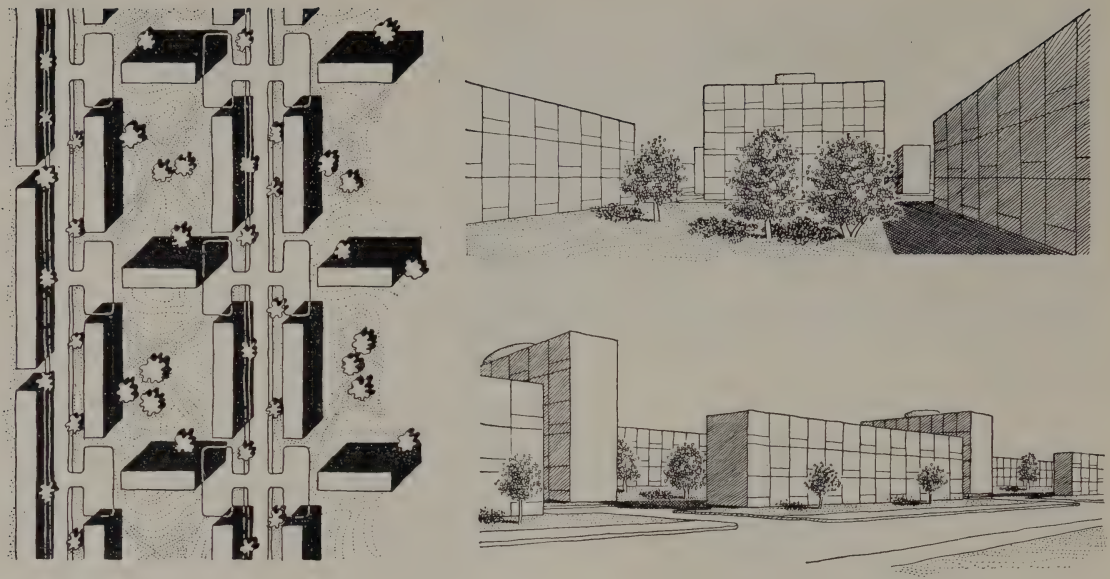


FIG. 89

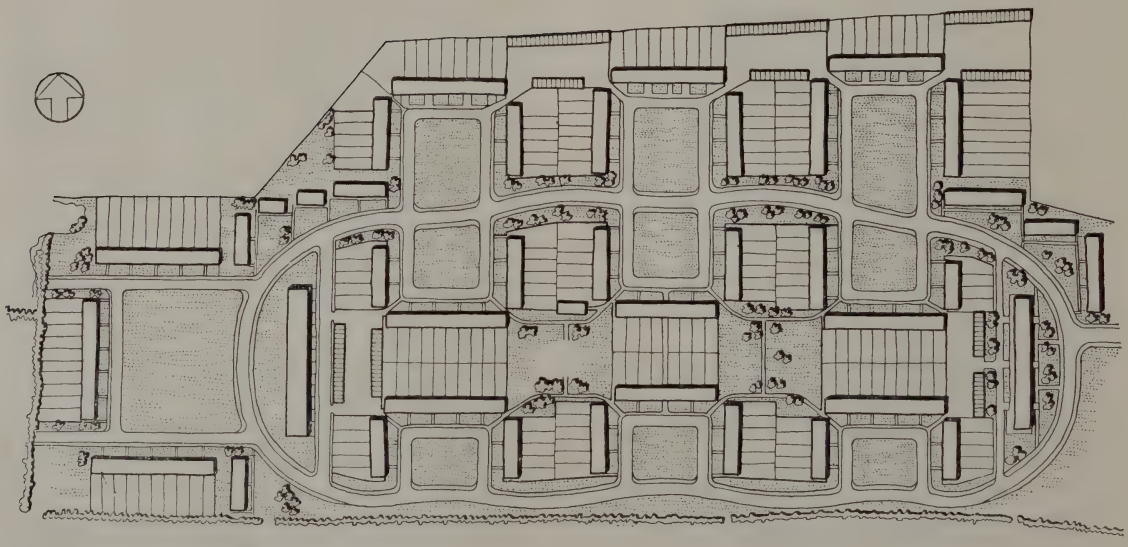


FIG. 90 Monks Park Estate, Coventry. *D. E. E. Gibson, City Archt.*

FIG. 91 Monks Park Estate, Coventry.

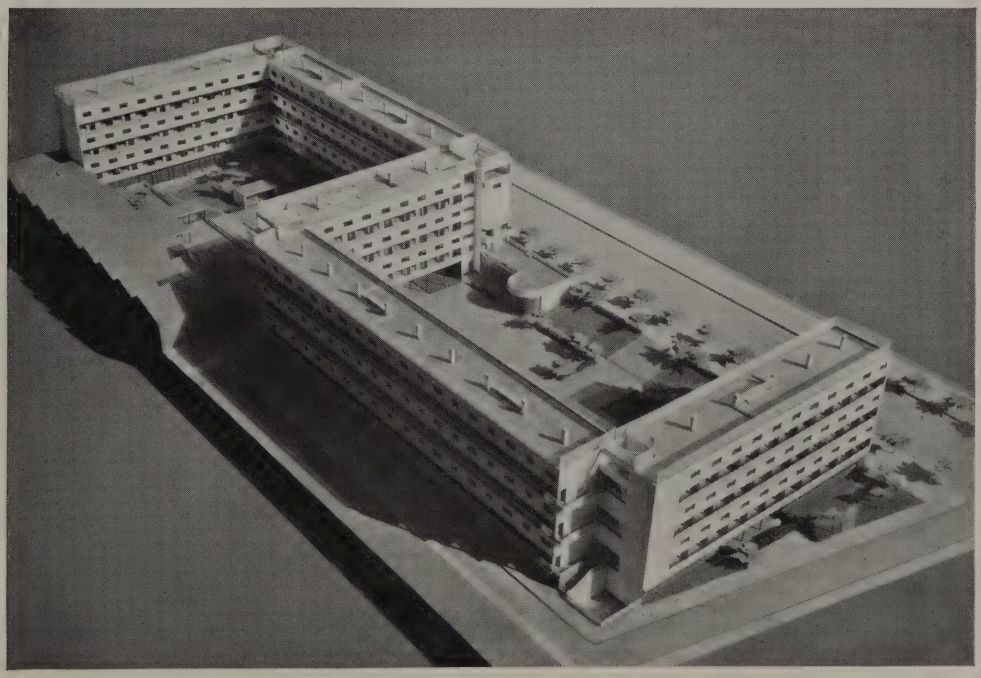
and others in which the linkage of one space with another can be seen.

Nevertheless the spaces may be rather loose in character, and there is much to be said for closing up the corners. For example, the City Architect of Coventry in his layout for Monks Park (Fig. 90) arranged the blocks in mirror symmetry of U shape to form a series of inter-related spaces. The road through the spaces is given a curve form to provide variety, and three-storey terrace houses are placed at the ends of the closes so that the increased height of the building is in better proportion to the floor of the space. (Fig. 91).

Again, a series of U-shaped blocks can be combined to form a fret pattern. Whilst difficult to form with houses (those on external angles will not have gardens) this pattern can make a very lively layout with flats. The buildings themselves have an interesting form, there is great variety in the spaces and the pattern can be extended laterally to form a series of spaces in reverse through which the service roads can run. Le Corbusier has used various fret patterns for his ideal cities—although most of them are very much out of human scale—and it was the basic pattern for the flats at Barcelona, one of the pioneer flat schemes in the modern movement (Fig. 92).

It is obvious that few sites are so even or devoid of feature that one particular pattern can be repeated over the whole of its area without loss of character, and obvious too, that the place would be a dull one to live in if this was done. All kinds of blocks may be used to form all sorts of spaces. The problem in layout is to obtain a balance between a sense of

FIG. 92 Model of flats, Barcelona.



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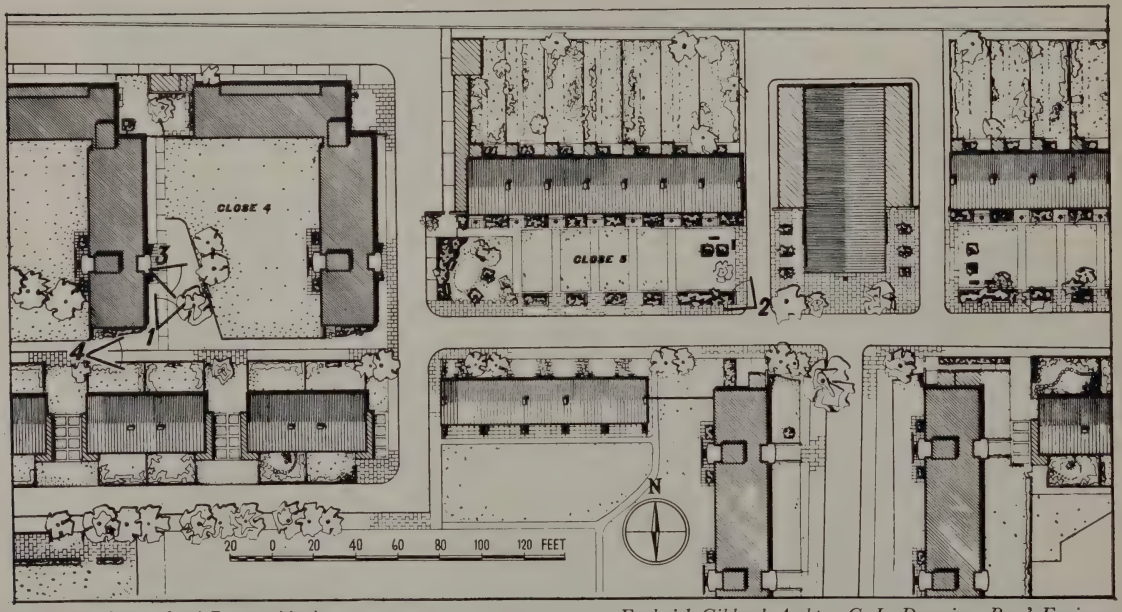


FIG. 93 Somerford Estate, Hackney. *Frederick Gibberd, Archt. G. L. Downing, Boro' Engineer.*

enclosure to the individual spaces and a sense of linkage between them. A series of unfolding prospects should be created in which the intimate localized spaces of the individual closes are contrasted with the longer or wider spaces that occur when they merge into each other. Thus in the first view of the scheme of mixed development at the Somerford Estate, Hackney (Fig. 93) the corner is built up and a sense of enclosure is created. The same effect is obtained in the adjacent close (2) by sliding the block of flats behind the terrace of houses. But from the third viewpoint the spaces are beginning to be linked by the gap in the corner, though this is restricted by the tree and the gable end (3). Finally, from the viewpoint of the path (4) the two closes lose their separate identity and combine into one long space.

CHAPTER V

LAYOUT WITH LANDSCAPE

BUILDINGS BOUNDING OPEN LANDSCAPE

One of the most difficult contemporary siting problems is the treatment of dwellings against areas of natural landscape. In the majority of pre-war housing estates there were few open spaces and those that did occur were generally buried in the back land behind the houses. Today, not only has the problem of more and larger open spaces to be faced, but there is a commendable desire to bring them into the urban scene, both as things of beauty in themselves and as contrast with the architecture.

The problem hinges in the main on the character of the open space, on the method of access to the buildings, and on the character of the space around the buildings. The greatest difficulties occur with houses because of their small scale and because of the attached private gardens. For these reasons amongst others, many proposals for neighbourhood designs show the main open spaces bounded by blocks of flats. The number of flats required to meet the needs of the population is, however, likely to be limited, and it is improbable that there will be enough of them to line all the open spaces. It is advisable, therefore, to concentrate here on the more difficult problem of relating houses to open space.

It is quite usual to see a street of small houses with their backs facing a simple space like a school playing field (Fig. 94). The construction is cheap as both sides of the road are built on, but the appearance is seldom satisfactory. The buildings are pushed back from the edge of the space by a ragged foreground of gardens, with the consequence that they are partially masked, the space lacks definition, and the two elements remain separate entities.

When a straight rear fence bounds the open space, the only treatment, short of the most rigorous control over the use of the back garden, is the planting of a heavy screen of trees on the edge of the space. But this is no real solution, as, apart from the long period before the screen is effective, it merely divorces the vertical plane of the façades from the horizontal plane of the space. The prospect of architecture seen across the landscape is lost, as are the views of the open space from the dwellings.

Aerofilms, Ltd.

FIG. 94

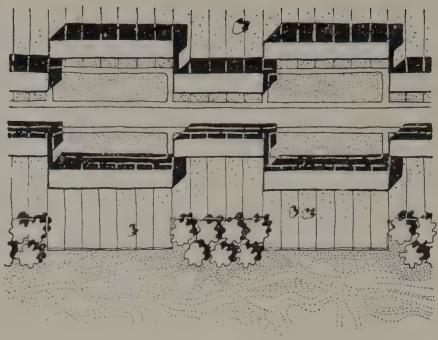


FIG. 95 ↑↓

Fig. 95 shows a compromise solution. Alternate terraces are staggered so that along the boundary of the space recessions are formed in which trees are planted in clumps. All the houses have views of the open space, although the angle of view is in some cases rather oblique. The trees being planted in depth have a three-dimensional quality contrasting with the two-dimensional façades of the houses seen between the clumps.

Another compromise solution (Fig. 96) is where the houses are entered through private gardens placed on the road side, there being nothing more than a small terrace or flower beds between the façade of the buildings and the open space. The prospect from the road can be very poor, but there are often instances where some sacrifice of the road picture is worth making for the sake of the views across the space. The lay-out has the advantage that it is cheap, as both road frontages are used, and providing the dwelling and the gardens are specially designed, it can be most effective.

The buildings in the last sketch have gaps between them so that some of the houses on the opposite side of the road can have a glimpse of the open space. Still more houses will have such views, if those adjacent to the open space are

FIG. 96 ↑↓

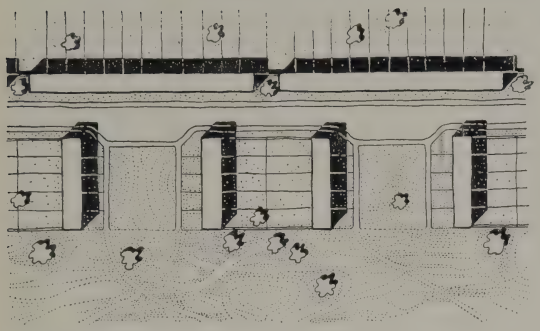


FIG. 97 ↑↓

effect they have on the open space; in the first, the gables and screen walls tend to form a wall to the space, but in the second the landscape flows up between the buildings and makes a much more irregular boundary.

There are likely to be spaces that are so formal or so important in character that it is necessary to bound them by one-sided development, so that the buildings come hard up against the horizontal plane. At Harlow it was desired to emphasize the character of the neighbourhood cricket field and to link its northern boundary with the adjacent community buildings. The

placed at right angles to the road (Figs. 97-98). In both cases illustrated the blocks nearest to the open space are grouped in pairs with their gable ends linked by walls screening the gardens. In the first case (Fig. 97) most of the houses at right angles to the space will have oblique views of it, but in the second (Fig. 98) the houses are staggered so that they can have windows looking straight on to it. There is a marked difference between the two schemes in the

plan in Fig. 74 shows that this boundary is formed by a long terrace of houses which are curved on plan to reflect the circular shape of the field. The houses are planned on three storeys so that the height of the space wall is brought more into proportion with the space floor.

The prototypes of this form of development are the eighteenth and early nineteenth century terraces of houses overlooking the landscape. Fig. 99 shows Lewes Crescent, Brighton, where the buildings form an undulating wall to an open space which extends up between the buildings in an irregular wedge. It is not possible today to obtain such splendid scenic effects with houses, as their height is limited to three storeys, but with spaces of unusual beauty it may be worth sacrificing the house with its private garden for the views and the general character which can be obtained with blocks of flats.

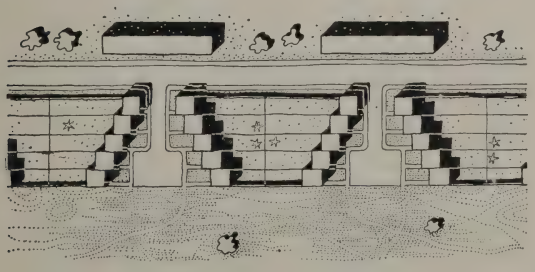


FIG. 98 ↑↓

FIG. 99 Lewes Crescent, Brighton. *National Buildings Record.*

HOUSES IN PARALLEL SERIES

There is one type of layout with houses which treats the private garden as a landscaped area to be seen from the road, and that is when the houses are arranged in parallel series. The most common form of parallel layout is where the houses are placed in equidistant rows and all face the same direction. The street gives access to the front doors of one row and to the rear gardens of another, so that the problem of rear access is solved. The sheds at the bottom of each garden can be arranged so that one half opens into the garden as a store, and the other half on to the road as a garage or cycle store for the house opposite. Every house can thus have a store near to the place where it is most needed : vehicles opposite to the front door, and garden implements at the bottom of the garden (Fig. 100*a*). Since the spacing of the blocks is equidistant (as compared with normal layout where the road space is nearly always narrower than the garden space), it is possible to give each building the same orientation and angle of light. The scientific correctness which is thus possible has made this type of layout a favourite with some architects.

From the street there is an asymmetrical composition with rows of houses on one side and private gardens on the other, instead of the more usual symmetrical arrangement of houses on both sides of the street. The visual

FIG. 100 A

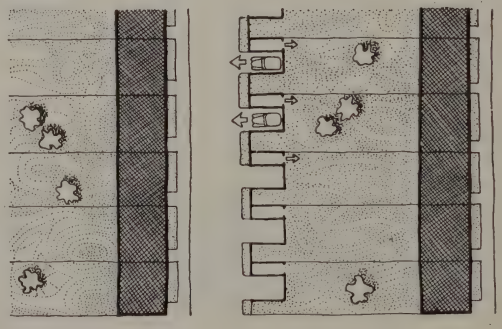
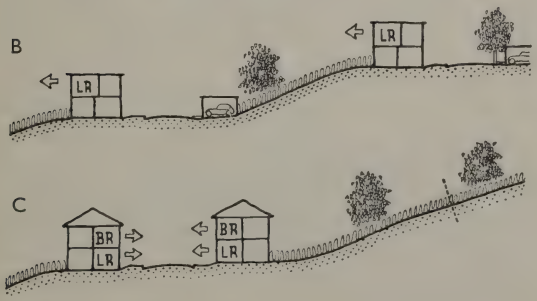


FIG. 101 Housing, Neubuhl, Zurich. *Swissair.*

success of the layout rests almost entirely on the extent to which the private gardens merge into an overall landscaped picture. If the tenants can be persuaded to accept some curtailment of their individual liberty it may succeed, but once the gardens develop idiosyncracies of their owners or become neglected the layout breaks down.

It is obvious that one-sided development is very high in road costs, and perhaps the only justification for it is when the topography is unusual. Fig. 100*b* shows such a case where the buildings are placed in series along the contours of a steep slope. Each dwelling is designed to have the living room on the garden side looking towards the view and the kitchen, bathroom and staircase on the road side.



Underneath the parallel block diagram a two-sided street arrangement is shown (Fig. 100*c*) so that the advantages of the former can be seen. These may be summarized as follows :— cheaper road construction (the road having fewer houses on it can be narrower, so there is far less cut and fill), all the living rooms can open on to the private garden and towards the view, each dwelling has the same angle of light and the street picture can be very much better since a symmetrical arrangement on sloping ground seldom looks satisfactory. It may be worth placing the living rooms on the first floor to obtain a clear view over the houses in the next row, or substituting a flat roof for the usual pitched roof to give less obstruction to the view, and to provide additional viewing space (Fig. 101). In any event it is often worth staggering the blocks so that diagonal views can be obtained between them.

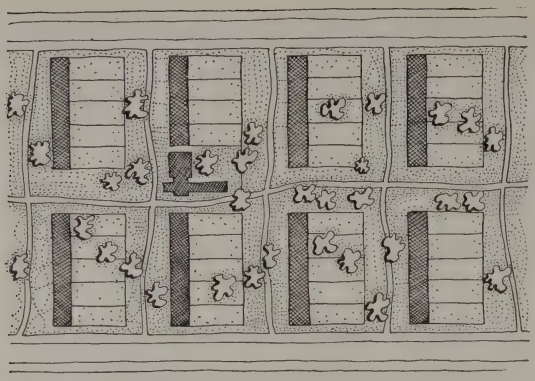


FIG. 102

M. L. Jenkins.

FIG. 103 Flats, Gerbrandsvej, Copenhagen.

PARALLEL TERRACES WITH PATH ACCESS

When a footpath is substituted for a road as the means of access to the front of the dwellings, the parallel block layout begins to become economical. This arrangement with path access is obviously undesirable on a very steep site (say over 1 in 15) since the roads will now run across the contours, but normally it will show considerable savings over the road access type of layout, particularly when the paths are long and the roads far apart (Fig. 102). The governing factor is the distance that the dustmen and tradesmen are willing to walk from their vehicles, which is generally taken to be about 100 feet with 150 feet as the maximum. With the former figure as a basis, the roads will be 200 feet apart which will provide a path frontage for about ten to a dozen houses.

DEVELOPMENT AT RIGHT ANGLES TO THE ROAD

Although there is little difference in plan pattern between layouts based on road and footpath access, they give an altogether different appearance from the street. In the first case, the houses appear as flat two-dimensional façades along the road, but in the second they are seen in three dimensions as a series of lateral façades receding behind each other, with the end elevations hard up against the road (Fig. 103).

A parallel series of this nature can be placed at right angles to an open space in a manner similar to the examples in Figs. 97-98 but the visual effect is not the same because in this case the private gardens cannot be shut out of sight behind linked screen walls. The two types are shown in the Coventry scheme (Fig. 105), the linked blocks in the south and the parallel series in the north.

When the houses are placed at right angles to the street their end elevations can be all important, and there are instances where it may be worth developing them to become a dominant feature of the composition. The visual emphasis is thus shifted from the garden spaces between the parallel blocks to the road itself, and the layout begins to take on the characteristics of a street picture. Thus, if an entrance door is placed in the end elevations and the latter are linked by screen walls, the lateral façades and the private gardens become secondary elements and the street picture gains both a sense of enclosure and a very definite rhythm (Fig. 104).

FIG. 104

FIG. 105 Model of Stonebridge Highway Estate, Coventry *D. E. E. Gibson, City Archt.*
The layout as executed differs slightly from that shown.

PARALLEL BLOCKS WITH MINIMUM GARDENS

Another solution to the problem of landscape and the rear garden is quite simply to make the garden so small that it is only an incident in the scene. The remaining space between the blocks is designed as a communal landscaped garden and the private ones are little more than terraces partially screened from view. This layout has been used successfully on the Continent (Fig. 106-107), but though there have been several such proposals in this country, there are few good modern examples, so strong is the desire for a private garden. It is significant that the tenants of houses laid out in this way at Harlow insisted on the communal garden being divided by fencing for their individual use. Nevertheless, it would be unwise to damn this form of layout outright until we have had considerably more experience of it. The public may become more appreciative of its advantages, and there are in fact many people living happily in the Victorian terrace blocks overlooking communal gardens in Kensington and similar high density urban areas.

INDEPENDENT PATH ACCESS

When the access to the dwellings is by footpath there is the advantage that the dwellings are divorced from the road; no traffic passes in front of the houses, and children can play there without fear of accident. This has led to schemes in which the paths giving access to the dwellings are linked to a main footpath system, running quite independently of the

FIGS. 106-107 Friluftstaden, Malmö. *E. S. Persson, Archt.*

roads. A landscape way is formed which is parallel to but independent of the roads, and nursery schools and play spaces can be sited in relation to it so that small children are isolated from road traffic (Fig 102).

As has already been suggested, landscape ways must be broad in scale to be effective and reasonable in maintenance costs, otherwise they may easily disintegrate into mean straggles of open space, decorated with laundry and junk and bounded by the fences of the private gardens. If however, broad open spaces are mixed with the dwelling groups the contrast between building and open space may be lost, the density will drop, trees and other growing things will become as important as the buildings, and the character of the design will change from urban to suburban.

PARALLEL FLAT BLOCKS

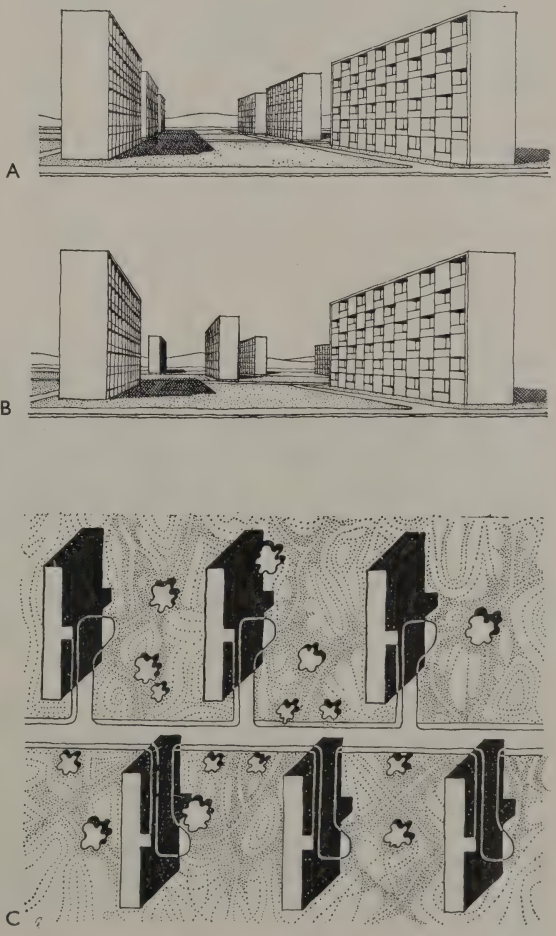
Although there are comparatively few examples in this country of houses being laid out in parallel series, there are far too many cases in which flats have been so arranged. A flat block of straight slab-like form is obviously cheaper to build than other shapes, the parallel layout can give scientifically correct light factors and orientation to the rooms, the road pattern is simpler and there is no problem of screening private gardens. Small wonder, therefore, that this type of layout has been so popular with those architects who have reacted most violently against the enclosed court-yard plan, and so popular with those whose chief concern has been to place the largest number of standard dwellings on a given site.

A layout of parallel blocks of flats repeated over a large area is generally very dull (Fig. 108).

FIG. 108 *Aerofilms, Ltd.*

When the spaces between the blocks are designed as landscaped gardens there can be fine contrasts between the architectural and natural forms, but they are seldom laid out to any conscious design. In consequence the buildings in all their rigidity dominate the scene and the appearance is monotonous in the extreme. Furthermore, without large scale landscaping the effect is restless, and between the blocks there is an impression of being in a corridor (Fig. 109*a*). This effect may to some extent be overcome if the blocks are staggered (Fig. 109*b* and *c*), because the end elevations of alternate blocks give a sense of enclosure. A better arrangement is, perhaps,

FIG. 109



to place the staggered blocks parallel to the road and allow their ends to overlap, so that the gaps between the buildings are not so apparent when viewed in perspective from the road. (Fig. 110).

Some authorities have arranged gallery access blocks in pairs with a common yard between them. The kitchen and service side of the buildings overlook the courtyards, and the habitable rooms the gardens on the opposite side (Fig. 111). This layout has two obvious disadvantages; first, if the orientation is correct for one block it will be wrong for the other, secondly, the service yard itself is likely to become noisy and untidy.

Unless the blocks are united by a really fine landscape design, the parallel layout is generally too open and too rigid for a large area of flats, and will almost always be improved by placing some of the blocks in the opposite direction to create a sense of enclosure (Fig. 112). With a few blocks, however, it can be perfectly satisfactory, particularly when they adjoin a main road or an open space. In the former case, the perspective from the road with the long façades receding behind each other can be very pleasing; and in the latter case, the landscape design of the open space can be swept up between the blocks (Fig. 113).

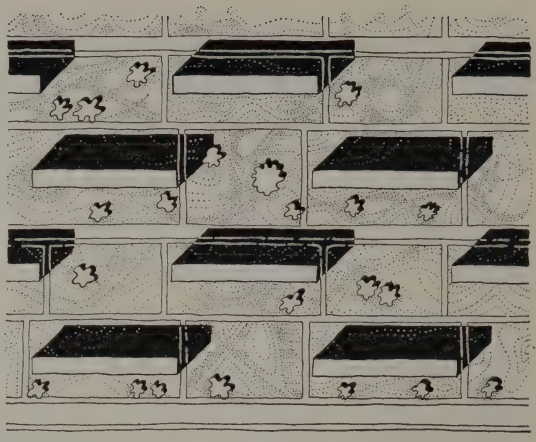


FIG. 110

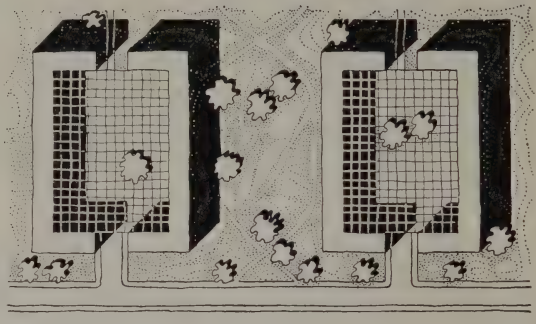


FIG. 111

FIG. 112 Fimlico Estate, Westminster. *Powell & Moya, Archts.*

FIG. 113 Riberhus, Malmö. *H. S. B., Archts*

FIG. 114

HILLY SITES

Tall blocks of flats of compact plan form are particularly suited to hilly sites because of their scale and the fact that they cover a small proportion of the land. The silhouette of the hill should not be too broken up by buildings, otherwise the appearance will be very ragged and the character of the topography will be destroyed (Fig. 114). Provided that they are widely spaced, the tall blocks will dramatize the silhouette without destroying its natural form.

Long blocks of flats can be sited quite successfully on a hill so long as they are arranged to follow the contours and their silhouette reflects the natural shape of the land. Success is more difficult with small houses, since a tooth and gap silhouette will result unless they are arranged in very long terraces. It is therefore safer to confine houses to the lower slopes, leaving the crown of the hill as natural landscape, or developing it with a mixture of tall and long blocks of flats (Fig. 115).

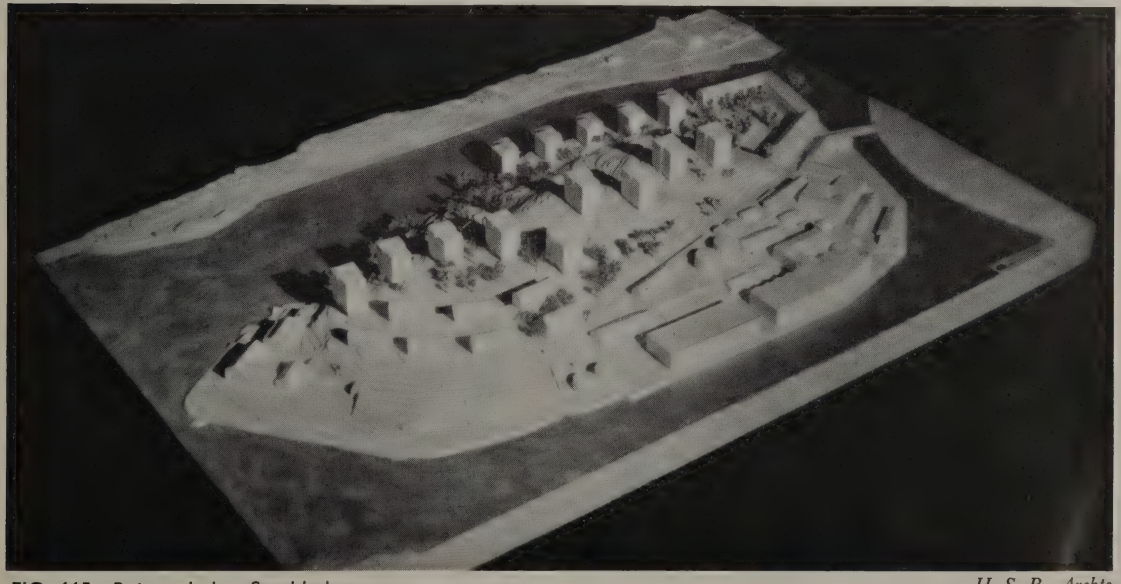


FIG. 115 Reimersholm, Stockholm. *H. S. B., Archts*

FIG. 116 Unité d'habitation, Marseilles. *Le Corbusier, Archt.* *R. Stallard.*

BUILDING IN SPACE

There have been several proposals for immense blocks of flats, standing wide apart in open landscape (Fig. 116). This is attractive in theory, since the least disturbance is caused to natural features, and it is possible to contrast stretches of landscape laid out in the fine tradition of English landscape gardening, with splendid buildings. However, apart from the fact that the scene gets beyond human scale, many people do not wish to be housed in such conditions. Aesthetically, the spaces are generally so large that the forms of the buildings no longer bear a relationship to one another, and tend to fall apart into independent compositions. The character of the development becomes that of loosely related blocks, each standing as a three-dimensional object in the open landscape, in much the same way as the cottage in the first illustration (Fig. 23). Some flats are needed in modern housing development, but instead of being concentrated in huge blocks in the open landscape, or for that matter in built-up areas, they should be distributed throughout the neighbourhood and mixed with other types of dwelling. So sited they can provide contrasts in mass and silhouette to the normal two-storey houses, and the layout can be designed as a series of spaces, each having its own special qualities, but all united by the structure of the neighbourhood plan. When buildings are thus brought together, it becomes possible to recapture that intimate and urbane quality which was once the characteristic of town development in this country.

PART THREE

DESIGN IN CITY CENTRES

By W. G. Holford

CHAPTER I.

THE PROBLEMS

Architectural Design, especially of the type of building which is commonly found in the central areas of cities, is one of the least satisfactory subjects of all for literary exposition or criticism. All that needs to be said about it can be summed up in the two words—*observation* and *experience:* the latter being taken to include experience of the ways in which people live and work in these places, as well as of the structural principles and the building regulations to which the designer has to conform. Much the same could be said of Civic Design, which is concerned as much with the spaces between buildings as with the appearance of the buildings themselves. But there is one important difference. A glance at the centres of most of our towns will show that less attention has been spared for this aspect of building development than for the internal planning of individual structures. And this is why it seems worthwhile, at the present stage of reconstruction after the war, to discuss the state of present practice in this field.

Design cannot be taught by correspondence; words are inadequate, and being inadequate may then become misleading, or even dangerous. For the competent designer a handbook on design is unnecessary, and for the incompetent it is almost useless as a medium of instruction. Yet because the design of city centres has so often gone by default, because the building programmes were not properly drawn up, nor properly co-ordinated; and because designers, clients and administrators have all in effect been talking different languages, it serves a useful purpose merely to set out the problems in an orderly way, and invite those who design and those who commission designs to think about them and to offer their solutions.

It is with this object in view, and not as a misguided attempt to be authoritative in a subject where authority is more deadening than enlivening in its effects, that the following notes are written.

SPECIAL PROBLEMS OF CENTRAL AREAS

Behind the physical form and outward appearance of the city are the economic and social forces which have brought the streets and buildings into existence. Any discussion on design must recognize this at the start, or remain purely subjective. Nevertheless, design has a function of its own, and is most important where it is most concentrated—that is to say, in the core or centre of the urban scene.

It is also at the centre that good design is most difficult to achieve, and for the following reasons. All towns are composed of two main elements; one is accommodation, or living space; the other is circulation, or movement between one unit of accommodation and another. At the centre, land is scarce, more sought after and usually more valuable than land on the outskirts. But just because central sites are more scarce and more valuable than others, the competition for them is greater, and the tendency is all the more pronounced to pile upon them as much building accommodation as they will hold—and sometimes a great deal more than can be conveniently handled by the public services.

At the very same point the movement of

Fox Photos

FIG. 117 Oxford Street, London

people and vehicles is also likely to be at its peak. Bus stops occur nearby, because the passenger load is heavy there; and in most cities traffic exchange points—such as Bank or Piccadilly Circus in London—become established, and once established cannot easily be altered or removed. The building concentration brings the traffic, and the traffic concentration perpetuates the magnetic attraction of the buildings in the centre (Fig. 117).

Thus is evolved the paradox described by M. le Corbusier and many another urban theorist before him; that whereas in the suburbs, or on the perimeter of the city, the aggregate of streets and carriageways is more than enough to carry all the traffic of the town, at the centre it is totally inadequate. This can be expressed very simply by two diagrams (Fig. 118).

These diagrams represent, of course, the typical town of concentric growth. For the linear town, strung out along a main road or a narrow valley, the diagrams would have to be altered. But the paradox remains; that where there is most need for circulating space it can least be provided (Fig. 119). And this conflict between the demands of building and traffic in all the world's great cities is reflected in every aspect of design, from the detail at a corner of a building block to the whole disposition of a civic centre.

Another condition which governs design in central areas to a greater extent than it does outside, is the variety of use and function to be found at the core of every large town, as compared with the simpler and more consistent character of an industrial or residential zone (Fig. 120). Modern planning practice, it is true, tends to eliminate the very marked difference which now exists between the two extremes. Not only are commercial, civic and educational buildings being distributed among the residential neighbourhoods, but the central tangle is being sorted out, shops and offices

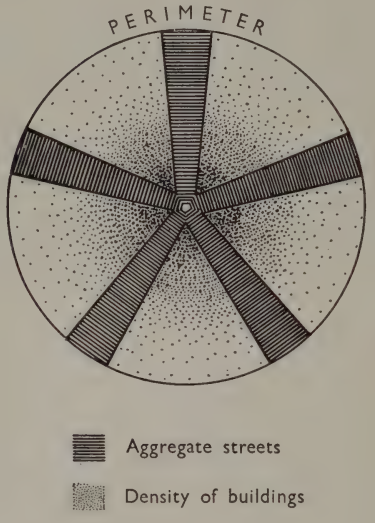


FIG. 118 Aggregate traffic volumes from perimeter to centre.

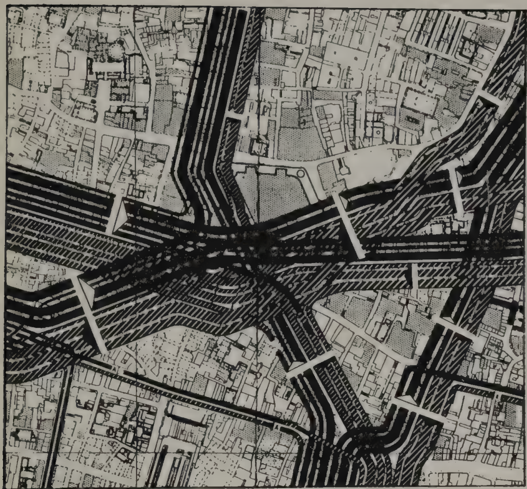


FIG. 119 Concentration of bus routes at the Bank, City of London.

grouped separately, and each building type given its appropriate form and layout. The multi-purpose building, like the multi-purpose street, is regarded as an unsatisfactory compromise.

Nevertheless the building block which is near the centre of gravity of a large urban area is always bound to be conditioned by this fact, and by its consequences. Not only will it be subject to greater intensity of use, but also to greater variety. Production, exchange, local and central administration, retail trading, and public assembly have too many services in common to be grouped economically in separate self-contained zones or sections of the city.

Moreover, even if the market value of the *land* is left out of account, the value of a *building* on a central site is such that when its original purpose has to be changed, it has at once to be put to an alternative and no less profitable use, or else demolished to make room for a new building. Conversions occur frequently in central districts. Shops are turned into offices, and the ground floors of offices into shops; warehouses are converted into workshops and vice versa. The currents of trade and fashion, the export market, administrative and commercial re-organizations—all these changes are reflected in continual movements between one set of commercial premises and another. And the constant desire of large concerns—particularly those which are nationalized or government sponsored—to house all their many departments under one roof or as compactly as possible, has led to many instances of development in terms familiar to housewives—namely, "make-do-and-mend."

This process of continuous adaptation to changing needs, which is a characteristic of all building development (except in new towns and new countries) but which is accelerated in the central areas of cities, brings with it a third and most significant condition which the town planners and architects have to take into account. This is the existence, in commercial and administrative centres, of buildings, and even groups of buildings, which are retained or preserved for other than economic reasons. They are buildings with sentimental or prestige values, and buildings of special architectural or historic interest.

In the 667 acres of the City of London, for example, there are no less than 103 sites and structures, some of them of considerable extent (such as St. Paul's, the Bank of England and St. Bartholomew's Hospital) which can be listed as historic monuments or buildings of special architectural value (Fig. 121). To these must

Sa = Shops.
Off = Offices, Banks, Post offices.
Wh = Warehouses.
c/- = Public buildings, etc.
RB = Residential buildings.
In = Industrial buildings.
WW = Waterworks.
SC = Sites cleared of buildings.

FIG. 120 Mixed uses in a typical central area.

FIG. 121 Distribution of historic buildings, City of London.

be added many more buildings which will be considered worthy of preservation in future, long after they have exceeded the normal span of life of the general run of buildings in the same category (Fig. 122).

X=Buildings condemned
1=Buildings erected before 1875
2=Buildings erected 1875-1914
3=Buildings erected since 1914
Z=Buildings extensively war damaged.
L=Buildings listed as of special interest.
P=Buildings protected by Preservation Orders.
M=Ancient Monuments.

FIG. 122 Mixed age and condition of buildings in a typical central area.

DESIGN AND THE LIFE OF BUILDINGS

It is probably too great a simplification to group all commercial and public buildings into two main types; those which are intended to be permanent, and those which have a calculated and limited life. Yet it is true to say that at any given time a shrewd judge of such matters can make a rough division of all the buildings in the central area of a town into (i) the already obsolete, (ii) the utilitarian short-life structures, and (iii) the remainder.

All buildings at the design stage, whether their creators know it or not, enter a race with time. Some are handicapped at the start, in that the building owner or promoter takes the view that every possible economy of space, material and equipment must be made, or—more honestly—that the building is only intended to pay its way for a certain period and will then be scrapped, like a motor car that is out of date. Even when handicapped in this

way a building design may be so simple and effective, its layout and situation so convenient, and its appearance so unpretentious and genuine, that it runs a much longer course than its contemporaries. Several of the plainest (and even one of the temporary) buildings erected after the Great Fire of London in 1666 are used today in very much the same way as they were in the seventeenth century, and are listed, moreover, as buildings of special architectural interest.

Other works of architecture have monumental beginnings. They are intended to be permanent; not—as in the masonry of the Pyramids of Egypt—for eternity, but for as long as can be foreseen. Not all such buildings survive into old age; some are found to be utterly uneconomic and wasteful; and if they occupy valuable sites, are pulled down at almost as great expense as they were put up. Others are converted and added to, and even if totally destroyed by fire and explosive (as in the case of the Chamber of the House of Commons), are built up again in much the same form as before. As buildings are shells for a variety of human organisms and activities, they must follow to some extent the fortunes of those activities. But the fact is inescapable that any building which shows vitality of design, and which has been built with care and judgment, will out-distance its competitors and be preserved for its own sake or that of its history by future generations.

In the centres of cities, therefore, the problems of design are no different in principle from those of the small town or village and of the residential estate; but they tend to be different in kind, and they are certainly different in degree. In the great urban concentrations traffic is thicker, building development is denser and more varied, and history itself—as expressed in brick and stone—is apt to be more in evidence, than in smaller, newer and more specialized forms of human settlement. These facts the designer ignores at his peril; but it is even more important that those who administer the Planning Acts in the larger towns, and especially the Planning Officer, his architectural advisers, and the particular committee to which they are responsible, should recognize the special opportunities which occur only in such centres, and should at the same time make allowances for the peculiar difficulties which confront the designers of new central buildings.

STREETS, ENCLOSED PLACES AND OPEN PLANNING

It is probably more logical to discuss the planner's problems first; civic design before building design. Generally speaking, there are but few basic effects which the civic designer can hope to achieve in contemporary town planning. There is the effect of the corridor street; there is the effect of grouping buildings round an open space, so as to give to some degree a sense of enclosure or pictorial composition; and there is the effect of setting both buildings and open spaces in an informal or natural landscape.

All these effects may be combined in the town picture. They may be achieved in a leisurely, small-scale, domestic fashion, or they may be heightened or sharpened so as to achieve drama.

The corridor street, for example, may be quiet and urbane, like Bentinck Street or Ely Place, (Fig. 123), in central London; or stand heavily on its dignity, like Kingsway

FIG. 123 Ely Place, London. *A. F. Kersting*

Donald McLeish

FIG. 124 Champs Elysées, Paris.

National Buildings Record

FIG. 125 Bedford Sq. London.

FIG. 126 Rockefeller Centre, New York City.

(in the same city); or create a spectacular vista, like the Champs Elysées in Paris (Fig. 124).

Buildings grouped round an open space may, also, have a simple domestic quality, as in Bedford Square, London (Fig. 125); or a more formal appearance, as in the Place Vendôme, Paris; or they may achieve monumentality, as does Rockefeller Centre, New York (Fig. 126) on the vertical scale and the Red Square, Moscow, on the horizontal.

A landscape in the central area of a large town is bound to be composed more often of spaces between buildings than of natural scenery and vegetation. Yet here again the effect may vary between the quiet precinctual character of London's Inner Temple (Fig. 128), and the grandeurs of the Ringstrasse in Vienna (Fig. 127). (A recent example of " townscape " —if one may call it so, though not a permanent one—was the layout of the South Bank Exhibition between Westminster and Waterloo Bridges (Fig. 130)).

Reviewing the enormously wide range of examples in one or more of these three categories, one cannot help noticing that the most successful are those which are the most true to type. A corridor street that maintains a consistent scale in its two frontages, notwithstanding variation in individual designs or even in building materials, is more successful than one which does not. Loss of scale, as in John Adam Street (Fig. 129), or failure ever to attain it, as in Marsham

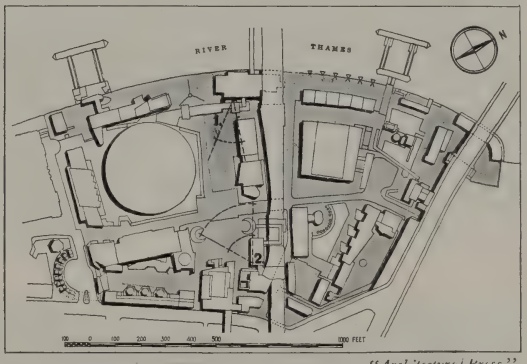
FIG. 127 Ringstrasse, Vienna.

Jane Bown.

FIG. 128 King's Bench Walk, Inner Temple—as repaired after war damage.

FIG. 129 Loss of scale, John Adam Street, London.

David Potts.



"Architectural Press".

"The Times".

FIG. 130 The South Bank Exhibition, London, 1951.

FIG. 131 Absence of scale, Marsham Street, London.

FIG. 132 King's Parade, Cambridge.

FIG. 133 Canberra, Federal Capital of Australia.

↑ ↓

Street (Fig. 131)—to take two examples from London—detract from the essential value of this particular effect, which is dependent on a certain measure of control over design. This control may be exercised by authority of some sort, or it may result from conformity to a canon of taste. Whatever the cause, the aesthetic effect is lost when this control is absent. It may be replaced by an entirely different set of values, but only if the whole picture is carefully re-designed. More often the outcome is uncertainty and confusion.

Similarly with groups of buildings, squares and public places; a symmetrical composition which is incomplete, such as the Civic Centre at Canberra (the Federal Capital of Australia) (Fig. 133), and an asymmetrical composition which is thrown off balance, as in the case of King's Parade, Cambridge, by the addition of the Caius College tower at the corner of Trinity Street (Fig. 132), are both as disappointing to citizen and visitor alike, as the more obvious examples of the collapse of civic values, such as Berkeley Square in Mayfair (Figs. 134-135), or Tower Hill, by the City of London (Fig. 136). The unity of design of

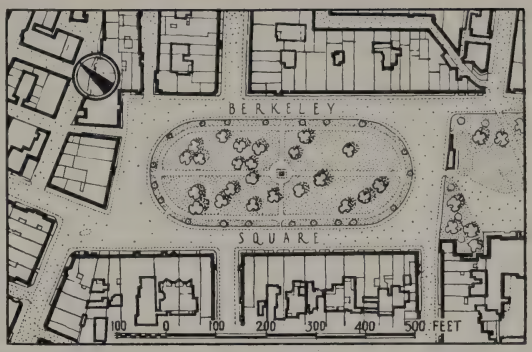


FIG. 134 Berkeley Square, London—as designed.

Aerofilms Ltd.

FIG. 135 Berkeley Square, London—as it has become.

FIG. 136 Tower Hill area, London.

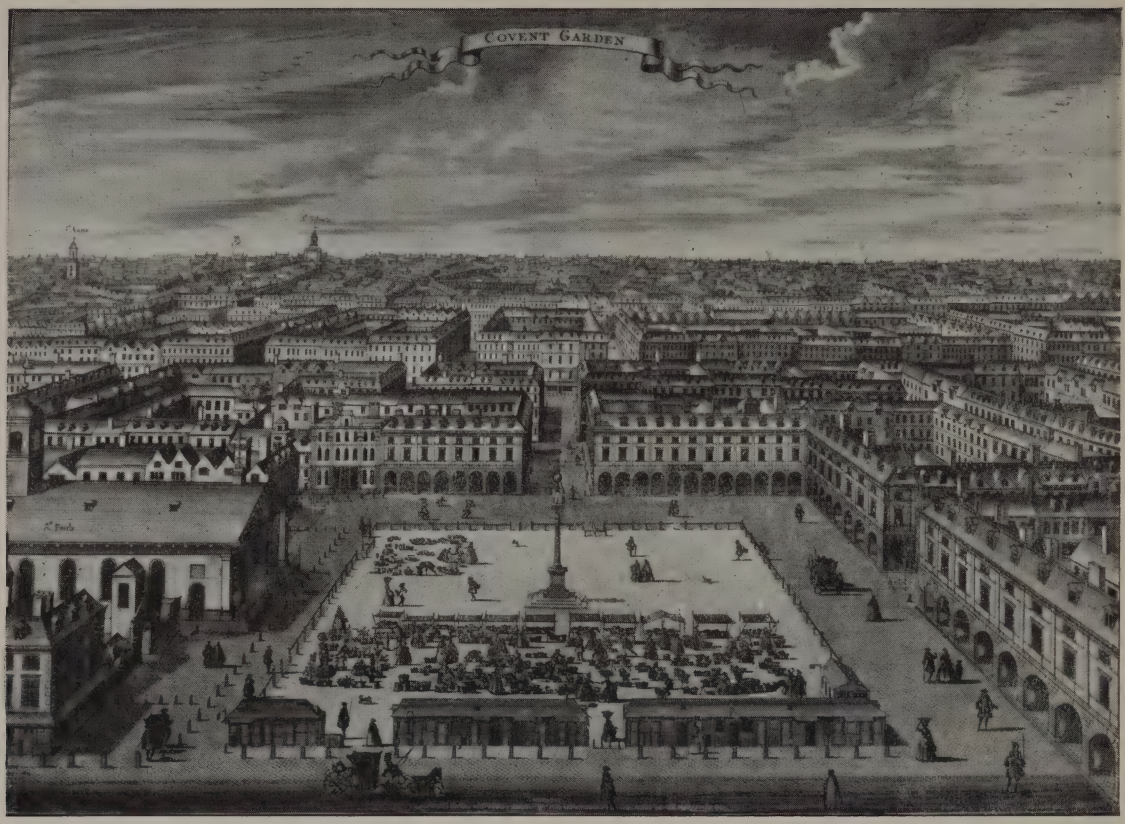


FIG. 137 The Piazza, Covent Garden, London—1720.

many an enclosed place in this country—as at Covent Garden Piazza (Fig. 137), Mecklenburgh and Brunswick Squares within the Foundling Estate, and the Exchange Flags, Liverpool—has been lost, without the compensation of a new, though different type of civic composition. The quiet dignified family party has been broken up by the intrusion of loud overgrown strangers who have introduced another scale, and another set of commercial values. Where the conversion is complete, a new kind of unity—or even an organized disunity—may appear. Extreme examples of this can be seen at Piccadilly Circus (Fig. 138), and at Times Square in New York City. Civic architecture—in the accepted sense—is no longer the medium of expression; but there is a design value created by the techniques of illumination, of advertisement and of permanent display. Exhibition planning has more than once demonstrated, in temporary materials, the logical objectives of this kind of design. Purists may reject it as being outside the pale of criticism altogether; but its human appeal is irresistible, and it should be within the contemporary planner's competence to design a setting in which the structural framework, the services and the modelling of the site are the permanent and static elements, while the dynamic elements are light, colour and movement. The problem of traffic circulation is discussed later: it is alien to most types of traditional civic composition, but it is only just beginning to be imaginatively handled in a few modern designs for city centres.

Thus it is only in the third type of central area planning, where the buildings and open spaces, though subject to regulation on grounds of traffic engineering, daylighting and total bulk or volume, are freely composed and informally planted, that the conflict between old and new forms of development is less

FIG. 138 Piccadilly Circus, London—by day and night.

International News Photos.

disruptive. Not only that; for open planning offers the best chance of combining the more scientific standards of building control and traffic flow which modern conditions require, with a new aesthetic of town design. This new aesthetic can include the traditional effects of civic composition, such as the vista, the corridor street, the formal square, the symmetrical forecourt to a great public building. But it need not be dominated by them, for they become minor and proportionate parts of a more varied and a more open landscape.

In the *Redevelopment of Central Areas*, an advisory handbook published for the Ministry of Town and Country Planning in 1947,* alternative ways of redeveloping two typical office areas were shown in Figures 74-81. The last illustration in each case was of a solution on open planning lines, which provided for clean and efficient circulation and access to each building, good daylighting, ventilation and protection from traffic noises, open space on all sides of the blocks, and parking space for 60-70 cars. What was shown there as possible for two small sites in Central London could be applied on a larger scale to the greater part of a whole business district in a big city. At this scale the open spaces, gardens or parking areas between buildings and bordering on the main roads would of course be larger and more varied, and some of the buildings might well be higher. But the principle of the alternation of long and short views between buildings, and of perspective gained by light and shade occurring in continually changing patterns instead of in geometric and regimented lines, is the same in each case (Fig. 139).

* (*H.M.S.O.* 12*s.* 6*d.* net.)

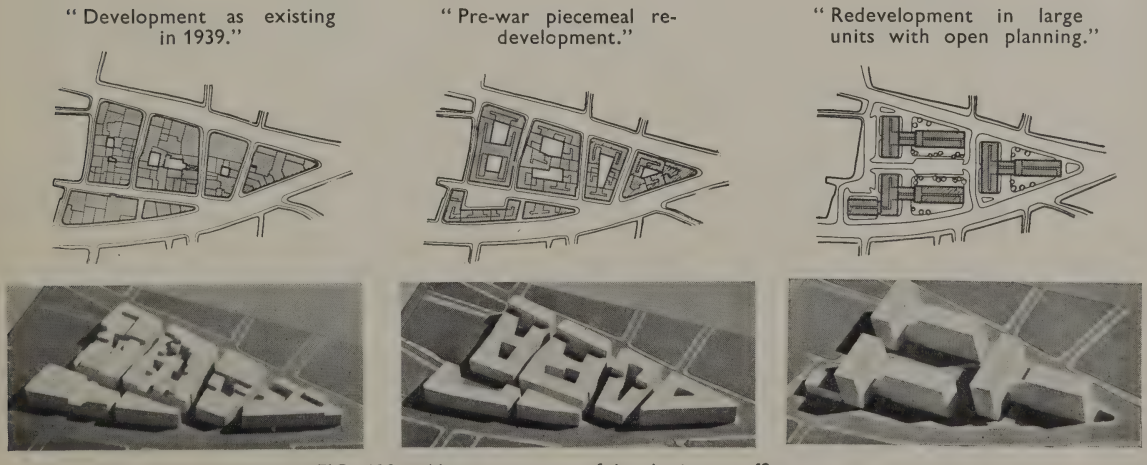


FIG. 139. Alternative ways of developing an office area

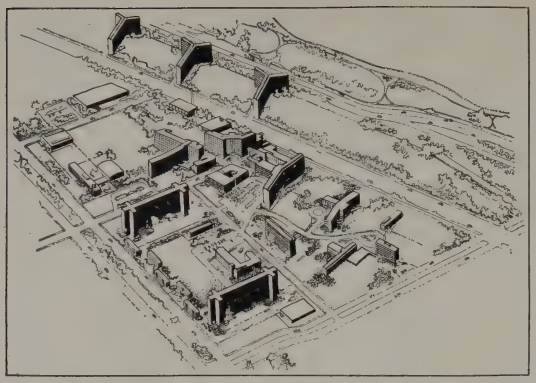


FIG. 140 Redevelopment plan for the Michael Reese Hospital, Central South Side, Chicago.
Michael Reese Hospital: Planning staff.

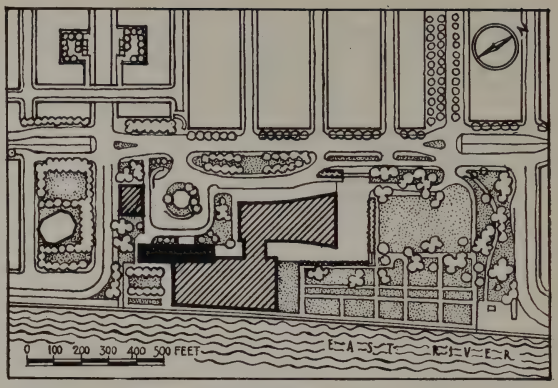


FIG. 141 U.N.O. Headquarters, New York City—a sketch plan.

The principle, of course, is not new. It can be studied in a wide range of historic examples, from that of the Acropolis at Athens in the fifth century B.C., down to the Redevelopment Plan for the Central South Side of Chicago, made in the late 1940's (Fig. 140). But its use as a conscious theme of social and artistic design in towns is by no means widely accepted. The Greeks strove for symmetry in individual buildings and balance in layout, so as to give an all-round view of the chief monuments. The informality and varied modelling of mediaeval German cities, and of the Italian hill towns, are often due to irregularity of contour and the needs of defence. It is only during the present century that studies have been made of the organic disposition of metropolitan buildings, more often than not on relatively flat sites, and resulting in a modified form of spatial composition. This has sometimes resulted from, and sometimes led to, an interest in modified types of building design. For example, the shop or the enquiry counter of a modern commercial building may be at the side of the pavement, but the main block of offices in a tower, well set back from the street. Auditoria and assembly rooms may be planned in the midst of a specially designed garden, as in the case of the United Nations Headquarters in New York (Fig. 141). Factories and public buildings may combine tall blocks with low wings and extensive car parks, and may provide access for pedestrians and vehicles at different levels.

CONSISTENCY IN EACH CATEGORY

The street pictures, the aerial views, and the characteristic landscape of this type of town design are obviously very different from those limited to the more traditional Renaissance ideas of civic architecture and decoration. Yet a corridor street, an enclosed square with uniform (or at least unified) façades, a terminal vista, the dominance of an historic monument, or of an ancient church, over its surrounding buildings—all these may find a place in a redevelopment plan for a city centre. In view of our rich heritage of historic architecture it is generally true to say that they *must* find a place. But it is equally true to say that each of these contributory elements should be complete in itself and form an integral part of the larger pattern. For example, if Ludgate Circus is to be redesigned as an enclosed place, if Ludgate Hill is to remain a corridor and a processional street, and if St. Paul's Cathedral is to be unchallenged as the dominant architectural feature in this part of the City of London, then the individual buildings within all these compositions must play their part in contributing to the scenic character of the street or square in which they are situated. Skyscraper office buildings, even if they act as an architectural foil to the great dome, should form part of a more openly planned section of the City—at a sufficient distance.

In matters of design one can never afford to

be dogmatic; but there would certainly be less waste and muddle and aesthetic confusion if it were more generally recognized that there are fundamentally different approaches to the making of a town picture; that each has its particular values, and a particular technique of adaptation to the practical problems of its period; and that unity of idea—both in the plan as a whole and in each major part of it—makes for a much greater awareness of the beauty and power of civic design, than the nullifying kind of compromise which tries to accommodate all comers, and includes too many ideas in a small compass. A planning control with a simple recognizable objective will act as a stimulus to the good designer; controls which are merely expedient and have no basis in design, will cause him to lose interest. Not only that, but they invite the unscrupulous developer to take advantage of them if he can.

CHAPTER II

THE STREET

> ". . . Indeed when England is at war her men are not fighting for England as a whole. Many of them are fighting for an English village, but far greater numbers are fighting for a street in an English town. For the townsman there is a distant dearness in the High Street, a secret sweetness in the old bus-stop, as strong as the countryman finds in his hill and his stream."
>
> (Thomas Burke: *The English Townsman*, 1946)

CIRCULATION AND THE SIZE OF BLOCKS

Traffic, with the paved surfaces that carry it, is the most formative of all influences on design in the central areas of towns. A hilltop monument, a country mansion, even a mediaeval cathedral in its close, can be regarded almost independently of its access roads. But as soon as houses are strung together along a street, that street becomes a part of the design of the houses.

As the concentration of building increases towards the centre of a city, the circulation space between the buildings has more and more effect upon their form and character. Only when a building is withdrawn from the street, and is insulated by forecourts or gardens, can it dissociate itself to some extent from the street architecture. This fact is emphasized by a comparison of the areas given over to circulation space. Whereas the roads of a farm or a country estate may not represent more than 3 per cent. of its superficial area, those of a housing estate may total 12-15 per cent., and those of an industrial estate 18-20 per cent. In the core of the town, however, the paved surfaces of all the streets and footways seldom amount to less than 30 per cent. of the whole built-up area.

The shape of building accommodation today is essentially rectangular. Beds, tables, woven mats and carpets, and the larger articles of furniture are made for rectangular rooms. Stairways, lifts and corridors continue this rectilinear pattern. The framing of buildings in wood or concrete, though it is sometimes adapted to produce curved or irregular forms, normally follows the right angle. So building plots usually provide for this by having rectangular outlines, even though they include yards or gardens. And it is obvious that the chequer-board or gridiron pattern of subdivision makes for easy measurement in the first place, simple standardization, and convenient exchange and disposal.

Circulation, on the other hand, is not always most easily achieved by means of straight lines, and only rarely by right-angled junctions. It is true that most piped and cabled services prefer straight or nearly straight runs, and that the best line of approach from one street to another—if traffic has to turn both ways—is at an angle of 90 degrees. But, as the word implies, the curve is essential to the smooth operation of any system of circulation.

Therefore, under unplanned conditions, the two main elements of town design become

competitive, if not mutually destructive. Circulation increases in extent and intensity towards the centre of the town, and at the same time accommodation increases in volume. Moreover the streets and buildings tend to be brought closer together. Sometimes, in fact, they are interwoven so finely that the building blocks become too small for effective development except in a vertical direction, and the streets too short and too frequently intersected.

In Johannesburg, South Africa, for example, most of the central blocks were laid out only 50 feet apart, the blocks being 200 feet square (Fig. 142). The original subdivisions made every site a corner site, but these have since been subdivided further in some cases, and amalgamated in others. Excluding internal courts, arcades and alleys, 36 per cent. of the land area is in the streets. There are major traffic intersections in all directions every 250 feet; and considerable doubt as to which is the main road when crossing.

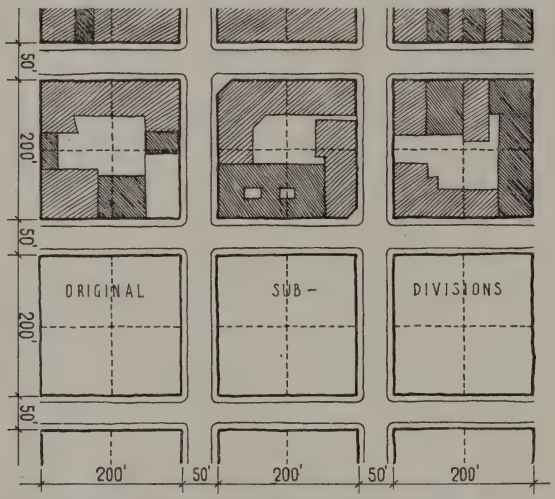


FIG. 142 Central Area, Johannesburg, S. Africa.

METHODS OF SECURING EMPHASIS

The effect of this type of street layout is familiar to everyone. Every foot of pavement frontage becomes valuable, especially at ground-floor level, for shopping and display purposes. The designs of façades become shallow, without modelling. Enrichment and decoration tend to be concentrated (i) at the ground-floor level, up to the height of the fascia, or canopy, (ii) at the corner, and (iii) in towers or cupolas which can be seen from a distance—particularly if they can carry sky signs, advertisements, or some kind of electric illumination at night.

From a traffic point of view such a layout is disadvantageous, as it is slow, inconvenient and indecisive. There is too little parking space for shops and offices, both at the kerb and in the interiors of blocks, and every additional carriageway across the pavement into an interior yard or court increases the annoyance to pedestrians.

FIG. 143 Recent shopfronts, London. *James Cubitt & Partners, Archts.*

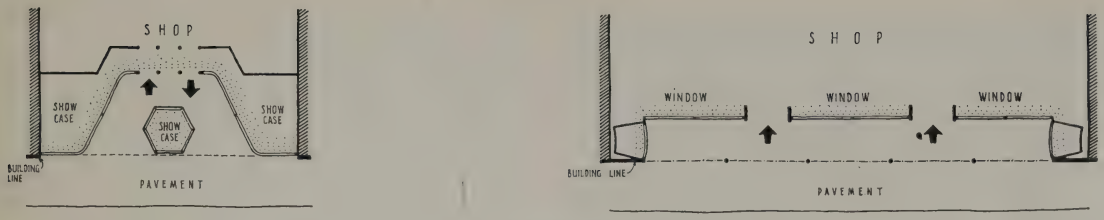


FIG. 144 Treatment of shop fronts.

The remedy is a new layout altogether, or redevelopment to a larger scale; but where this is impossible—and this is usually the case, on account of the prohibitive cost and disturbance of street widening and closure, and the loss of valuable space during rebuilding—the designer's task is to take advantage of such merits as the layout possesses and emphasize its good points.

Thus, if a narrow street, or a series of alternate streets, cannot be made entirely pedestrian, then at least the pedestrians' point of view should be studied first, and care should be taken over those parts of the building and the street which they will mostly use and, occasionally, look at.

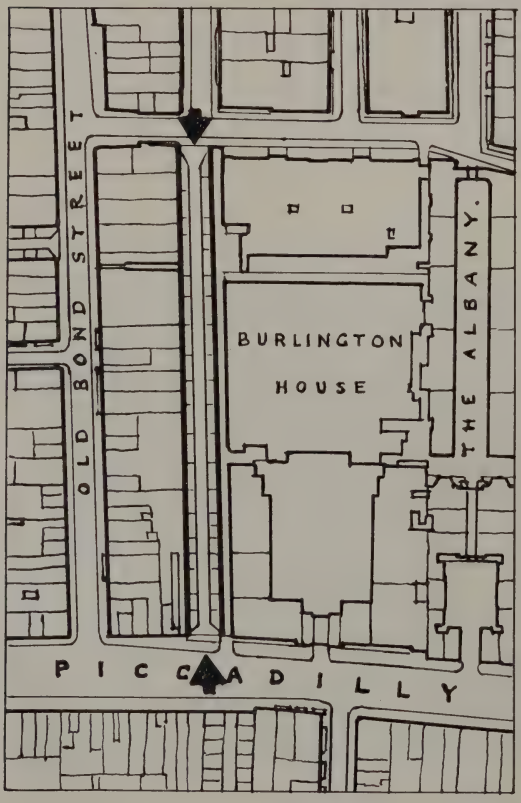
Apart from the design of the shop windows themselves, their framing and their surrounding surfaces play an important part in the ground-floor picture. The treatment of glass, and the opening up of interesting views into the interior of such buildings as galleries, department stores and the foyers of theatres, can extend the dimensions, and the attractions of the pavement. (Fig. 143).

The pavement itself should be adequate for its traffic, and yet not be so wide as to wear a dreary deserted look outside the peak hours. (Any dimension greater than 20 feet is likely to be suitable only for a few very special situations, even in central areas.) Where the pavement is unavoidably narrow, space for shop window gazing and display is worth providing inside the building line. This used to be common practice for cinemas, and many shops and department stores have followed the same arrangement (Fig. 144).

FIG. 145 Colonnaded shops, Totnes, Devon.
National Building Record

FIG. 146 Pavement arcade, Ritz Hotel, London.
Barratt's Photo Press Ltd.

FIG. 147-148 Burlington Arcade, London.



SHOPPING STREETS AND ARCADES

Rows of small shops, with standard frontage widths of 16 feet up to 22 feet or so, can be unified at ground-floor level by (i) a continuous fascia with lettering of uniform scale, or (ii) by a projecting canopy, regularly stepped if necessary on a sloping street, or (iii) by an arcade or colonnade with its outer face at least 18 inches back from the kerb line.

The colonnade, in spite of well-known examples at Tunbridge Wells, Chester, Bath and many other towns (Fig. 145), has been very little used for shopping centres during the present century. While the arcade, which is a name given to a covered way with arches or vaults, such as Covent Garden Piazza, or the Piccadilly front of the Ritz Hotel (Fig. 146), as well as to pedestrian shopping streets cutting through building blocks from one street to another, such as the Burlington (Figs. 147-148) or Princes Arcades, has been commercially successful in very few places and then only in the most populous shopping centres of large cities, such as London and Birmingham.

In a newly designed shopping centre, however, as in a New Town, canopies (Fig. 149), colonnades and arcades may reappear; and there is no reason why they should not be commercially successful as shopping habits change to take advantage of them—particularly in wet weather.

It is also worth noting that in sunny climates the covered, or at least shaded, arcade is very

FIG. 149 Pavement canopy, Hemel Hempstead.
H. K. Ablett, Archt.

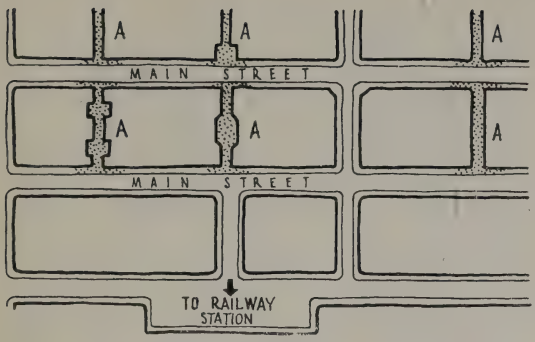


FIG. 150 Pedestrian arcades, Perth, W. Australia.

popular; and it is also extremely convenient for providing a pedestrian way across a long narrow building block from one traffic street to another.

In Pretoria, for example, which is the administrative capital of the Union of South Africa, the central blocks measure 700 by 440 feet; and one or two arcades of small shops, offices and restaurants have been created to divide some of the busiest ones. Similarly in Perth, the capital of Western Australia, arcades provide a short cut for pedestrians from the pavement of one main street to another (Fig. 150).

THE STREET CORNER

Successful treatment of street corners is far more difficult than the handling of intermediate frontages in a street. For one thing there are traffic inconveniences which cannot be entirely overcome without removing all wheeled traffic to another, and preferably lower, level. Pedestrians have to cross at these junctions, and unless there are three-phased lights and a special crossing signal, they have to thread their way between vehicles which are executing left-hand or right-hand turns. On the pavement itself, the rectangular corner of a building which prevents pedestrians who are walking towards one another at right angles from catching sight of each other's approach, may be awkward in crowded thoroughfares. And for wheeled traffic it may be dangerous, unless there are traffic lights or some form of STOP sign to slow down the driver before he reaches the crossing.

For practical reasons, therefore, traffic authorities in many cities have imposed " sight lines " at street corners, which result in setting back, or cutting off, the angle of the building. This may be done by retreating behind the building line on one or both frontages, leaving a wide pavement or some other form of open space at the corner. Or it may be achieved more economically by a splay on the building itself, or by a rounded angle, or by a double angle. Alternatively a line of sight may be opened across the corner at pavement level, with a cantilever or a corbel projecting at first floor level, or even by supporting the apex of the angle on a narrow pier or a column and leaving clear the first building bay on each side of it (Figs. 151-152).

All these devices, and especially the splay, tend to weaken the appearance of the building. The splay is sometimes incorporated successfully into the design of a definitely three-sided façade, and may then frame the principal entrance; and in the case of an acute-angled corner it may be used with advantage. But a comparatively small splay on a massive building and a normal splay on a narrow building, are alike incongruous. Except in structures with open plans and light glazed panels for their outer walls, any effect of strength and solidity which the building is designed to have is reduced at

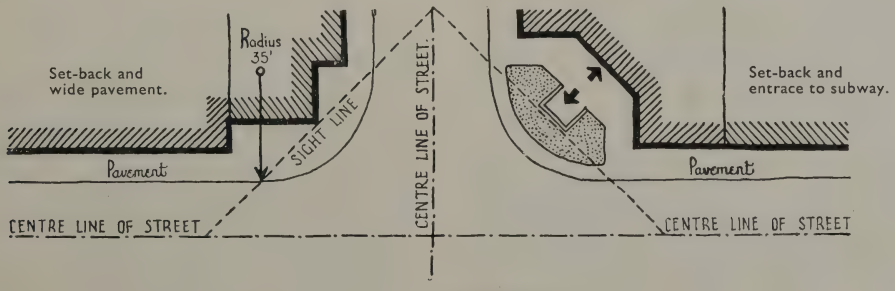


FIG. 151 Corner Treatments.

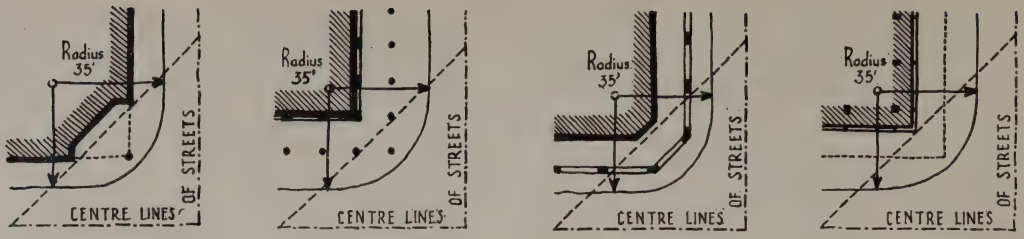


FIG. 152 Corner treatments at street junctions.

the very points where it should be most apparent.

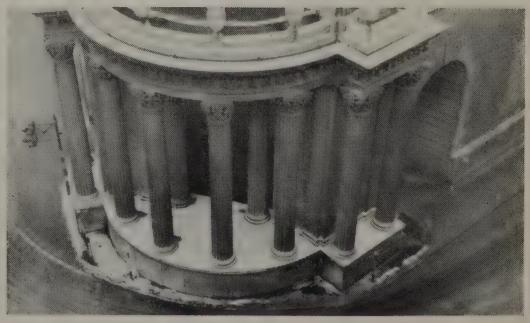
Many architects have attempted to regain space and solidity at the corner of a building by making a feature of some kind of corbel or overhang above the ground floor level, or by emphasizing the stanchion or column at the apex of the angle, by means of sculpture or of architectural decoration. Oddly enough the treatment of a street corner by means of a footway between the angle column and the next bay of an arcade or colonnade, is very rare in this country, though common enough in Italy and France (Fig. 153). A curious and unhappy example in the City of London can be seen at the " Tivoli " corner of the Bank of England, at the angle of Princes Street and Lothbury (Fig. 154).

The treatment of the splayed corner needs further and more logical consideration by architects and traffic experts alike. Many of the difficulties spring from the incompatible requirements of rectilinear structures and curvilinear traffic lines. Unless buildings in central areas are expected merely to fill up the spaces left by streets and pavements—no matter whether these are major arteries or minor cul-de-sacs—there must be some rational correspondence between architectural design and traffic design, based on the relative importance of each in any given case.

If one were to establish a purely mathematical correspondence, one could say that the length of the sight line, and the angle of vision, should be proportionate to the average speeds of

← FIG. 153 The Doges' Palace, Venice.

FIG. 154 Tivoli Corner, Bank of England.



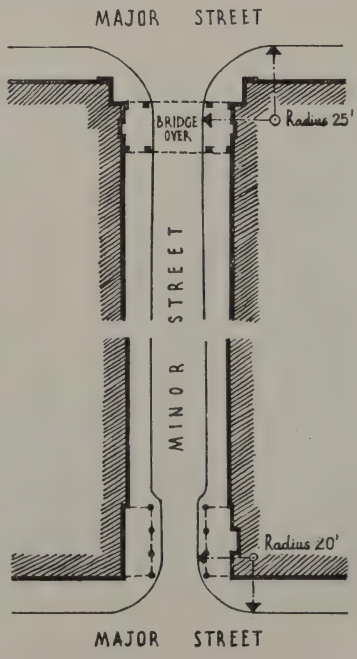
traffic on the two streets concerned and also to the angle at which they meet. But few motorists and hardly any pedestrians could appreciate such finely graded distinctions, and neither roads nor vehicles are designed to suit them. The average citizen should, however, instantly recognize two, or at the most three types of junction in the solidly built-up part of a town: i.e., two major roads, or a major and a minor road, or two minor roads. And there is no reason why the buildings themselves—unless they are set back behind parkways or forecourts—should not correspond in their corner treatments to this simple classification, emphasizing it and giving it three-dimensional expression.

There are, for example, minor streets of more architectural than traffic value, such as Petty Cury, in Cambridge, or Albemarle Street, off Piccadilly, or Walbrook, in the City of London (Fig. 155), where anything in the nature of an invitation to vehicles to use them as " through " streets, is altogether out of character. Walbrook, one of the oldest streets in London (and once the site of a Roman riverside quay) is essentially pedestrian. Morning and evening crowds of City workers walk through it on their way between Cannon Street Station and the Bank. This is the kind of street in which, at its junction with main traffic arteries at either end, the corner treatment of the buildings should suggest a restriction of entry rather than a welcome to vehicles. In other words it should have the character of a semi-private courtyard—such as that in Burlington House—into which cars do not normally penetrate unless they have business on the premises. This character could be achieved by bridging over the 20 foot carriageway, or by drawing the opposing façades at the end of the minor street closer together by extending over the pavement for a depth of 30 feet or so (Fig. 156), or at the least by maintaining as unbroken a building line as possible on the major road—which suggests solid corners and a reasonably wide pavement.

In the past a unified design on both sides of a public street was only possible when one owner owned both properties and one architect created the composition. Bath Street in Bath,

FIG. 155 Walbrook, City of London—a minor street.

FIG. 156 Treatment of junctions between major and minor streets.



probably the only doubly colonnaded street in England, is a superb example of a skilfully proportioned street. It was designed by Thomas Baldwin in 1791 (Figs. 157-158). John Nash, in Regent's Park and Regent Street, made more than one design in which symmetrical or at any rate balanced compositions on either side of a street were built for different owners. During the nineteenth century in England, the practice grew of designing *within* blocks, rather than on both sides of a street; and variety of style tended towards disunity and romantic outlines.

Today the Planning Acts have introduced once more the "area of comprehensive redevelopment", this time under local authority ownership, so the opportunities for designing both sides and both ends of a street are likely to be more frequent in future.

VERTICAL FEATURES AND SILHOUETTES

Another way in which corridor streets in business areas have been given particular emphasis in design, has been by means of a vertical feature, such as a tower, spire, cupola, or—on the least pretentious scale—a flagstaff. This introduces the subject of skylines and silhouettes, a subject more often associated with hill towns, mediaeval and baroque architecture, and picturesque street scenes than with contemporary flat-roofed buildings and shopping centres.

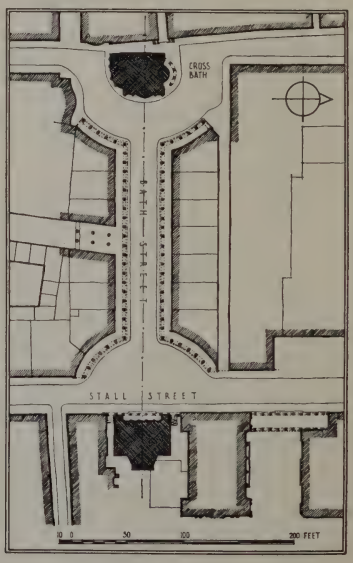
Nevertheless, silhouettes have a special value; primarily as visible symbols of the significance of certain buildings or building groups in the town plan; secondly for their legitimate advertising value (whether this is to mark the position of the nearest Underground Station, or of a commercial cinema); and lastly because of the variety and interest they introduce into a part of the town which may otherwise be flat, unaccented and depressingly uniform.

> ". . . silent, bare,
> Ships, towers, domes, theatres, and temples lie
> Open unto the fields, and to the sky;
> All bright and glittering in the smokeless air."

Thus wrote Wordsworth, on Westminster Bridge, 150 years ago. And while it is true that a clear view of the distant spires calls for a fine day, yet it is on drab days and among buildings blackened by smoke and worn by weather, that distinctive outlines are especially welcome. In conditions such as this an interesting silhouette is more important than a fine surface texture or even a nice proportion of window to wall (Fig. 159).

FIGS. 157-158 Bath Street, Bath.

R. F. Wills.



"The Times".

FIG. 159 Silhouettes, Central London.

A good silhouette must grow out of prepared foundations. To have a long flat roof or parapet, and then to place upon it an ornamental cupola, is to make the latter appear as an unhappy afterthought. The spire of a church has to be designed with the tower that supports it; and in the same way, any tall building with a distinctive outline to its upper storeys must be seen to spring from the pavement or some other recognizable datum, and not appear to be resting on the roof of the same or an adjacent building.

It was sometimes the practice among classical designers to lower the height of a building before raising it in the form of a tower. This made the necessary separation between the general horizontal outline of the building and its vertical feature, and at the same time gave added scale and emphasis to the tower.

This inflection of the design is worth remembering when later buildings are added in a corridor street on either side of a vertical feature such as an old church tower. The adjacent buildings look much better if they are lower than the average height of the remaining

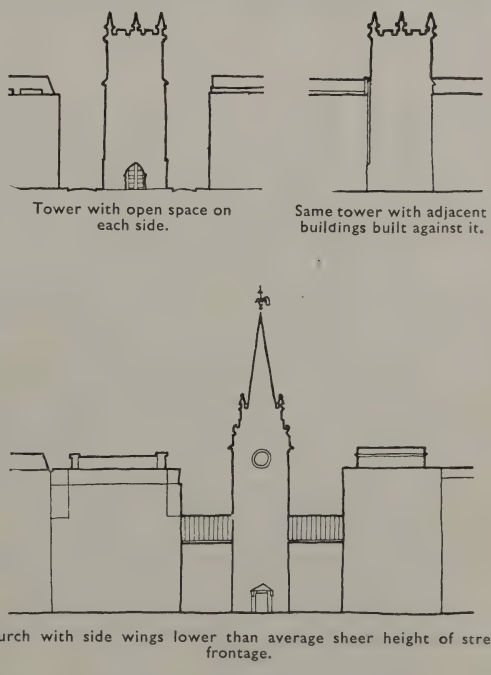


FIG. 160 Relation between towers and adjacent buildings

buildings in the street, with a vertical feature between them (Fig. 160). It is a commonplace that the proportions of a street, when expressed as a ratio between its width and the average height of the flanking buildings, should appear to the eye as decisive; either the height should be greater than the width, giving a cool shaded alley-like effect; or the width should obviously be greater than the height, giving an effect of openness and amplitude.

FIG. 161 Lower Regent Street, London.

Associated Press

FIG. 162 The Plaza, Rockefeller Centre, New York City.

THE CORRIDOR AND THE TREATMENT OF ITS WALLS

Inflection is also important in the design of the street as a whole. Where there is a terminal feature, as in Bath Street (already referred to) or Castle Street, Liverpool, or Lower Regent Street, London, looking towards the Duke of York's column (Fig. 161), the street frontages become a frame; and although they may have plenty of interest in detail and minor differences in design, the effect is spoiled by any serious change of scale or by marked eccentricities of outline.

More often, however, the street is open at one or both ends, or else is closed by a non-accented building of the same scale and silhouette, or by the trees of a planted square or garden. In such a street, particularly in commercial areas, interest is created by a vertical feature in the frontage of one or other side of the street itself or by a corner tower which can be seen from two directions.

Streets in American cities, and in many others of gridiron plan, are very commonly modelled in this way; sometimes to such an extent that they can hardly any longer be called corridor streets (Fig. 163). Skyscraper towers, like the ancient brick ones of Bologna or San Gimignano in Italy (Fig. 164), provided they are well spaced out and set back from the street frontages on occasion, begin to form an open pattern of development which only needs the introduction of small formal and informal open spaces in their midst to approximate to real open planning.

One of the most remarkable instances of this is the Rockefeller Plaza and its surrounding skyscrapers between 5th and 6th Avenues, New York City (Fig. 162). The corridor street gridiron has here been partially broken up and an open space introduced for pedestrians between the traffic streets. But the greatest advance in design is in the spacing and orientation of the tall office blocks which provide

Fairchild Aerial Surveys Inc.

Fig. 163 Manhattan skyscrapers.

FIG. 164 San Gimignano brick towers —conjectural reconstruction.

Photo : D. Cusati

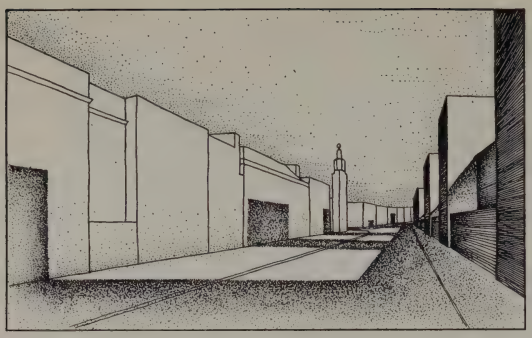


FIG. 165 Street with discontinuous facades.

interesting and changing views when seen from many outside vantage points.

The evolution of this type of design is discussed below. Where the opposite frontages of a street must remain continuous, at least on the ground or lower floors, the civic designer has to consider whether uniformity or regularity of treatment is called for, or whether a real improvement in appearance and lighting could be gained by bringing forward to the building line occasional towers or bastions at right angles to it.

This tends to heighten the perspective of the street, and to increase its interest, particularly if it is running east to west: shafts of sunlight and shadow fall across the street, moving with the position of the sun, and playing on the northern frontage (Fig. 165).

On the other hand uniformity seems desirable (i) in streets which have been designed with this in mind, even if there are gaps due to war damage to be made good, (ii) in residential streets of two-, three- or four-storeyed terrace houses, (iii) in short streets—particularly those which lead into a square or enclosed place, and those which have a terminal feature of some sort.

It is, of course, very seldom that the design of a whole street, or even of a substantial part of it, can be made in one office and at one time. More often it is a case of partial development or redevelopment which takes place in an already existing central area on the basis of an old or slightly revised building line. This kind of redevelopment is, however, continuous; for example the history of the City of London shows that in the last century and a half about one quarter of its total building accommodation has been redeveloped every thirty years. Therefore at any time, and not only as a result of fire or war damage or street-widening, proposals may come before the planning authority for the rebuilding of a block of shops or offices or warehouses—and the average size of such blocks is tending to increase.

CONTINUOUS ELEVATIONS AND THE STREET VIEW

The advantage of drawing up street pictures, in outline and to a fairly small scale, is obvious. Tallis's *Street Views of London* show what the continuous façades of certain streets looked like at that period, and give the silhouettes, heights, widths and fenestration of the building frontages (Fig. 166).

Other continuous elevations have been drawn from time to time (Fig. 167) not only for modern London streets, but also for smaller towns such as Lewes and Chipping Campden. The main object of these studies has been to show the

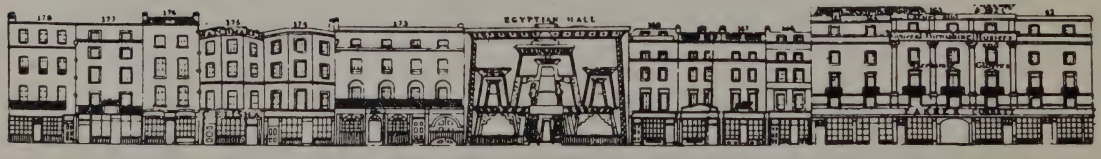


FIG. 166 Part of Piccadilly—C. 1830.

buildings of historic and architectural interest, and the relationship of later building designs to them. But it is an essential preliminary to any attempt at street design, even if only one building in it is to be altered or rebuilt, that the planning authority should have at least a linear elevation to scale of the present frontages and of former frontages also—if these are known.

Nothing is more revealing to the student of civic design than the successive changes in scale, character and material which streets in the central areas of towns have undergone; and nothing is more useful to those who have to give decisions on the suitability or otherwise of new designs submitted for approval.

Line drawings of each section of the more important streets, from the point where one cross road joins it to the next, are the basis of such a record. Minor variations can be made, as they occur, by redrawing individual buildings; major alterations by retracing the whole section to show the new work. Prints should be kept, and dated; and it is most useful to have an extra print on which notes of materials may be added, or colours applied where colour is an important element in the street picture.

A further use to which scale drawings of street elevations may be put, is in a peepshow. The plan of the street is drawn on the base of the box, or attached to it, with the building lines incised, or made into slots, or left upstanding, so that the paper elevations of each side of the street, cut out so as to appear as silhouettes, can be slid into them or pinned behind them. If the scale of the drawings is one-eighth of an inch to a foot or larger, it is possible for the eye to see and for the mind to imagine the effect of the street from either end, and the comparative scale of any new frontages designed for it (Fig. 168).

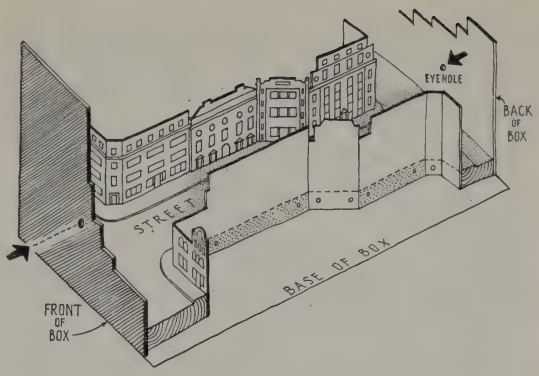


FIG. 168 A street Peep-show.

The great advantage of drawings is that they can be kept flat in a book or a plan chest and do not take up the room, nor gather the dust, of a three-dimensional model. There is a further advantage, in that a model, unless it is to a very large scale, must be looked down on. As with an aerial photograph, the roofs assume too great an importance, and the viewpoint of the pedestrian tends to be forgotten. Most designers know, also, that the mere drawing of comparative frontages to scale gives them a knowledge of, and a feeling for, the street as a whole which not only prompts observation but deepens it.

Architects are familiar with the " measured drawing ", as an aid to learning about design

FIG. 167 The same part of Piccadilly—C. 1930.

FIG. 169 Carlton House Terrace, London.

Scottish Tourist Board

FIG. 170 Princes Street and the Gardens, Edinburgh.

FIG. 171 King's Parade, Cambridge.

and construction. In the same way, those who attempt any form of architectural control over the design of streets and squares must have a knowledge of scale and proportion derived from the same method of measurement, and a sympathy for the designers' problems derived from a close comparison of executed designs.

Quite a number of conclusions can be reached by a study of these measured drawings. And the conclusions will certainly be as various as the façades themselves. Some are inescapable. Whatever the personal preferences of the student or critic, he cannot fail to be impressed by the value of informality and variety in the design of many famous streets—especially in this country. The number of purely formal streets, with symmetrical or uniform sides, is very limited. More frequent are the streets or open places, in which one formal frontage of buildings looks out on to trees or a park or a distant view—as the Carlton House Terraces do across the Mall to St. James's Park in London (Fig. 169), or Gambier Terrace to St. James's Mount in Liverpool.

But neither of these compositions, which are mainly Georgian or Regency in period, are as frequent or as typical as the informal streets, fortuitously varied, and compounded of buildings of many periods. Among these can be found streets of considerable scale, such as Princes Street, Edinburgh, which is bounded on one side by gardens studded with public buildings and monuments and which looks across the valley to the Castle and the Old Town on its rocky ridge (Fig. 170). There are also examples, half picturesque and half monumental, such as King's Parade, Cambridge, where a group of buildings of domestic scale—mainly in brick and timber and plaster—act as a foil to the stone dignities of King's College, the old Library and the Senate House (Fig. 171). Most common of all are the comparatively narrow streets in old towns, ranging from St. Mary-at-Hill in the City of London, to the High Street of Lewes, in Sussex*.

* See Chapter X of *Our Building Inheritance*, by W. H. Godfrey, 1944, for drawings of this street.

One of the most difficult problems for the designer of a new building in a street which is due to be widened, is the unfortunate effect of the setting back of his façade behind those remaining on either side of it. Usually this results in portions of the party walls of the remaining buildings being exposed, when they were certainly never designed to be so.

Partial street widening over long periods is in any case an unsatisfactory procedure; but where it occurs for anything more than a very temporary period, the least that can be done to assist the design of the new building is to bring the exposed flank walls into the design and treat them in the most appropriate way possible; i.e., by pointing the brickwork, or by painting or cement rendering or facing with stone.

The breaks in building line, cornice and roof, cannot be masked; but occasionally, as in Messrs. Boots' shop in St. Andrews Street, Cambridge, a temporary one-storey structure coming up to the old building line may be used for the time being, always provided that the alterations to conform to the widening can be carried out without great disturbance when the street works are actually executed.

CHAPTER III

THE ENCLOSED PLACE

TRAFFIC VERSUS AMENITY

The " enclosed place " has a long history, going back in Europe at least to the Minoan courts of Crete, and the Greek *agora*. Unlike the street, the square or enclosed place is not primarily for circulation but for rest, for assembly, for display, or as an arena. Modern traffic has disturbed the function of the old enclosed places and has usually given them a mixed and uncomfortable character. Not only does the moving vehicle forbid anything but a fleeting glimpse of the façades and silhouettes which the open space was designed to show off, but the standing vehicle, in large numbers, disturbs the foreground and spoils the more distant view.

Thomas Sharp, in *Oxford Replanned*, said that it was time that a revolution was made at pavement level: " To provide proper car standing facilities is one of the jobs of a town plan. What we must not do is to requisition the open areas rightfully provided by earlier generations for public enjoyment and divert them to serve as garages for unused cars merely because we are too improvident to provide the necessary facilities ".

Where public transport is cheap and convenient, a virtual restriction—through design—on the circulation and parking of the private car in central areas may reasonably be a feature of planning policy. But there are many towns in which the private vehicle (both cars and vans) represents over 90 per cent. of all vehicles on the streets, and in which the public services are not in a position to compete with them. In these towns an entirely new kind of enclosed place is required, devoted mainly or wholly to the parking of cars. Existing open spaces may also be partly brought into service; but the more formal type of square, designed as a forecourt, an amenity space or a town garden, will lose its character, its pleasantness and its proper function altogether unless its traffic facilities are subordinated to its other uses.

Even more so than with the street, the town planner who is concerned with civic design has to decide at the outset whether traffic movement is to be the chief feature of his enclosed place, either now or in the foreseeable future. If it is, then it follows that the newer buildings must turn their backs on the densest and most dangerous sections of the road or roundabout, drawing away from it as much as possible, and certainly not allowing the main exits to disgorge a stream of pedestrians at the peak hours into the busiest part of the system.

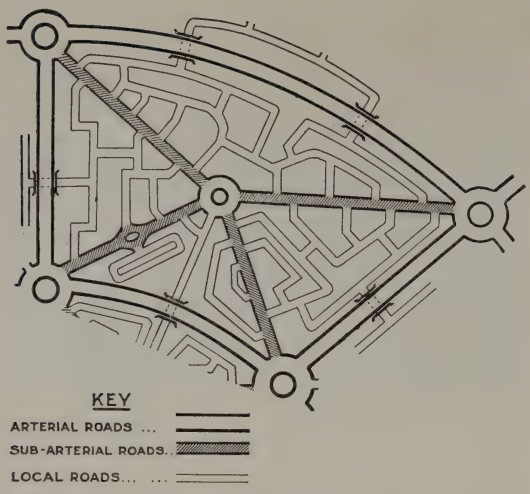


FIG. 172 Traffic Precincts.

The logical outcome of this process would of course be complete detachment of building from street. When Sir Alker Tripp* talks of a traffic " precinct ", he means an area in which no building or minor street or cul-de-sac opens immediately on to a main road (Fig. 172). But unless the entire precinct is pedestrian there must be carriageways for vehicles within it, ranging from secondary roads to service lanes.

The design problem in a square or enclosed place is therefore first and foremost a question of deciding what grades of traffic, if any at all, are to use it, pass through it or pass by it. In an altogether new centre this is not difficult to decide, although the satisfactory arrangement of a real " traffic place " is in itself far from easy. But few such places in the core of an existing city can be freshly created or recreated; there is bound to be a degree of conscious design or historical association about them which takes no account of traffic at all. Buildings will have been planned, for example, with their main entrances in the middle of what is now one side of a roundabout; others look their most imposing when viewed from the central axis of the composition, which may be the centre of a busy thoroughfare; others again, like the Mansion House (Fig. 173), the official residence of the Lord Mayor of London, have porticoes

* See *Town Planning and Road Traffic*, by H. Alker Tripp, 1942.

FIG. 173 The Mansion House, City of London.

or balconies ideally situated as rostrums for use on civic occasions, but instead of facing an open arena where the citizens can easily foregather, they face traffic routes, traffic islands and traffic lights.

Even in Trafalgar Square, the one place in central London apart from Horse Guards Parade and the Parks where large crowds can meet in the open air, there is almost continuous traffic around the pedestrian enclosure, and the orators need stentorian voices or mechanical amplifiers to make themselves heard.

As in so many other planning decisions, it is a question of balancing one value against another. In the first place the designers must appreciate the qualities that have created character, charm, intimacy, splendour and social significance in the past. Secondly, they must analyse the particular function of a particular square or open space in the zoning pattern and the network of communications in a town. They must then assess the engineering and the financial possibilities of change and improvement, and only then will they and their committees be in a position to weigh up the advantages or the loss that would be caused by improving the circulation at the cost of the amenities or vice versa.

HISTORIC EXAMPLES

What might be called " the aesthetic of enclosed places " has been described in a number of books and treatises, from Aristotle to Gropius, from Alberti to Le Corbusier.* Though little remains of the raw material of Greek *agora* and Roman *fora*, many of the original sites are still in use for much the same purposes, and the principles or the accidental circumstances under which they were built have been reconstructed by archaeologists and historians.

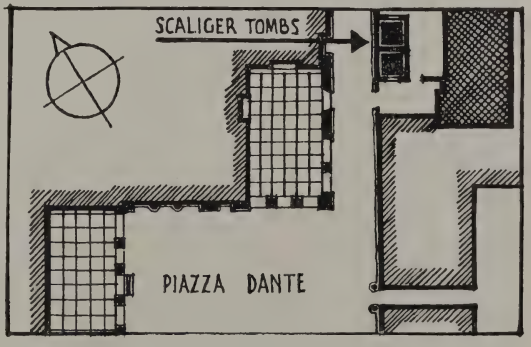
Enclosed places of the mediaeval period actually exist, generally with an overlay of later buildings and the addition of modern paving and street furniture. Although there are symmetrical and regular squares to be found, harking back to Roman and Romanesque models, the typical Gothic market place was rather more an absence of building—usually for some practical reason—than a conscious effort at space enclosure in the open air. The typical market place was irregular in shape and in the profile of its surrounding buildings. The monuments, sometimes of great beauty or intricacy, or both, are seldom dominant enough to hold the centre of a square.† They stand aside, often in the shadow of their parent churches, as in the case of the Scaliger Tombs at Verona (Figs. 174-175). It is not uncommon for a series of inter-related spaces to surround the great church or cathedral which dominates the town; each is a composition in itself, but there is no thought of a planned unity or equilibrium in the larger sense.

The physiognomy of mediaeval streets was dependent on the construction of individual houses. The bending and breaking of narrow façades, and (in northerly climates at least) high gables, allowed for a rise or fall in the streets which clung to the contours of a hillside; while even on flat sites the straight corridor was usually avoided for defensive reasons.

Some of the social and aesthetic values of mediaeval planning are valid today. The informality, variety and drama of a mediaeval place, much more than the picturesque quality

Photo Enit.

FIGS. 174-175 The Scaliger Tombs, Verona.



* A very brief selection would include Sir Raymond Unwin's *Town Planning in Practice*, Chapter VI; Camillo Sitte's *The Art of Building Cities*; A. E. Brinckmans' *Platz und Monument*.

† Most Gothic monuments, fountains and statues are quite unsuited to the mathematical centres of open spaces. Neo-Gothic designers have not always understood this. See, for example, the fountain in Laura Place, Bath (1877); and compare the Schöne Brunnen in Nuremberg which is properly related to and derives support from, the adjacent Lorenzenkirche.

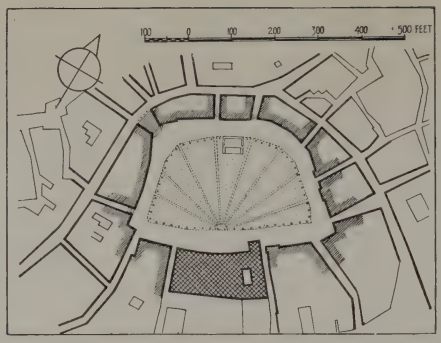


FIG. 176 Il Campo, Siena.

Both plans are drawn to the same scale.

FIG. 177 The Horseguards Parade, London.

so beloved of guidebooks, are virtues which are almost unknown in the contemporary version. Whether it was friendly or forbidding, the mediaeval enclosed space conveyed a sense of wonder and of expectancy; there was something of interest in every corner.

Socially, the buildings, and the spaces in front of them, expressed the condition of the citizens and the strength of the temporal or ecclesiastical power; and like a pool which is fed by winding streams on all sides, the best of the mediaeval squares and piazzas collected to themselves the real life of the towns. The *Campo*, at Siena (Fig. 176) (where a famous horse race is still run twice a year to perpetuate a custom originating in 1261), is a wonderful example of this. The piazza, which is shaped like a shallow fan-shell, is not astride the main roads, nor axially related to them. It is an arena, off the traffic routes, and approached mainly by pedestrian ways. On occasions thirty thousand people can be accommodated in it, and at the windows and balconies overlooking it.

The nearest approach in London to this Italian piazza is, curiously enough, the Horse Guards Parade (Fig. 177). Though not mediaeval in origin it performs the same function in the town plan, being approached—usually on foot—from any one of three bounding roads, and forming a comparatively undisturbed arena for parades, displays and public occasions. Even when all allowances are made for differences due to climate, the lack of what one might call " withdrawn places " for public assembly in English cities is very marked.*

From the fifteenth century onwards almost every variant of the " designed " open place can be found among the piazzas of Italy, which also possesses in St. Mark's at Venice and St Peter's in Rome, two of the most famous " forecourts " in the world. This short essay could not possibly include a history of the Italian piazza; but for present-day purposes it is worthwhile to comment on some of their features that are still of practical significance.

* But see the paved church yard at the west end of Bath Abbey and in front of the Pump Room (Fig. 178), and Exchange Flags, Liverpool.

FIG. 178 Abbey churchyard and Pump Room, Bath. *Reece Winstone*

FIG. 179 The Gattemalata Monument, Padua.

FIG. 180 The Colleoni Monument, Venice.

Photo: George Mansell.

FIG. 181 Statues in remodelled Parliament Square.

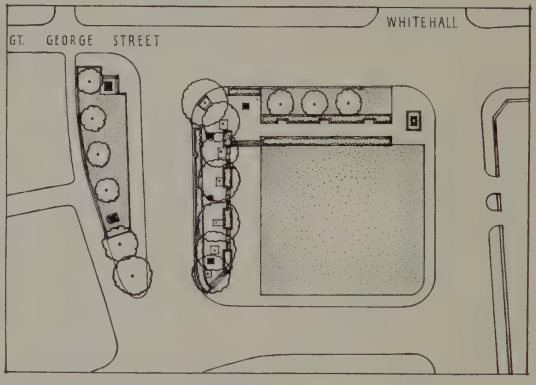
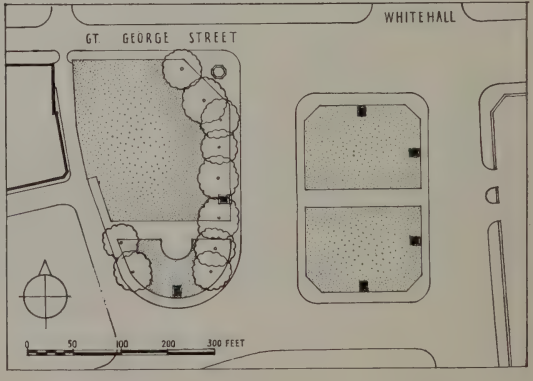


FIG. 182 Parliament Square as remodelled 1951.

FIG. 183 Parliament Square, London, C.1941.



THE EQUESTRIAN STATUE

The early Renaissance produced two examples of particular interest: the Gattemalata Monument at Padua (Fig. 179) and the Colleoni Monument in Venice.* Donatello took particular care to place the former in such a position that it could be seen at leisure from all sides and—because it is bronze—against the sky. Though conspicuous, it is aside from traffic streams and deliberately avoids the main axis of the Church of St. Anthony, whose gable lines serve instead to carry the eye downwards to horse and rider.

The Colleoni statue (Fig. 180) by Verrochio, in a small pedestrian square, seems almost to *create* the form of the open space in which it is set. It is again skilfully related to the Church of SS. Giovanni e Paolo; and as the buildings are high in proportion to the width of the place, the pedestal is also raised. The equestrian statue of Charles I, facing Whitehall in London, and the recent statue of Earl Haig, in Whitehall itself, although both well sited on historic grounds, and effective momentarily in a passing view, suffer from the lack of any tranquil pedestrian approach to the traffic islands on which they are placed.

In the case of large scale monuments in stone, or of figures on columns (such as those of Nelson or the Duke of York, in London), the distant view is the more important and axial placing an advantage. But this is not usually so with bronzes whether of natural or heroic scale; and the enclosed place—particularly one which allows views of the figure against the sky or against trees, provides a more suitable setting than a traffic rotary.† The recent reconstruction of Parliament Square, Westminster, although it still has to compromise between circulation and accommodation space, has notably improved the placing of most of its statues (Figs. 181-183).

Sites for new equestrian statues are not likely to be an important contemporary planning problem: but those monuments we have, because of their intrinsic and historic value, may sooner or later be driven by the exigencies of traffic to seek new or remodelled sites. The technique of displaying sculpture in the open air is being revived, and formal as well as informal presentation of it should be a part of the process.

THE ART OF SPACE CREATION

The early Renaissance idea of a piazza was that of a courtyard. Most important buildings had internal courts which came to have settled proportions because of the " orders " of architecture that governed the designs. These proportions were carried out to the external courtyards, one wall of which was usually formed by the front or side of the same building. Thus the feeling for enclosure by a system of buildings of like mass, dependent horizontally on an actual or implied spacing of columns or arches, grew into an aesthetic principle. These external spaces next began to influence the town plan itself. The tortuous and irregular layout of most city centres at that time provided what we should now call a series of " clearance areas ". A systematic straightening and extension of the street lines began. The enclosed spaces themselves became more formal, more decorated, and more important in the hierarchy of social values. The larger the palace the more imposing the forecourt. The art of space creation soon widened its range; and in the Middle Renaissance and Baroque periods in Europe we can study a great number of methods and devices by which civic effects of beauty and variety were obtained. Some of the creations were brand new, others were complete remodellings of earlier open spaces, but most were continuations and developments of building groups already existing that remained to form part of the new picture.

The builders of the French, and to an even greater extent the English, residential squares of the seventeenth and eighteenth centuries followed the courtyard tradition to a certain extent, but seldom curved and modelled the actual building frontages as a " respond " to the principal façade in the square, to the same

* As we know from Vasari's *Lives*, the Statue was commissioned by the State of Venice in 1446.

† Note the equestrian statue of Marcus Aurelius on the Capitol, Rome; where Michelangelo, in laying out the Piazza, actually lowered the bronze figures to bring them nearer to the eye level when seen from the colonnades at the side.

degree as the Baroque architects of Italy and Austria. The circle and the crescent and, even in the case of such hillside compositions as the Lansdown and Paragon terraces at Bath, the irregular curve—followed fixed building lines, and were not used to create urban scenery of a more theatrical character, such as one finds in the Piazza di S. Ignazio in Rome (Fig. 184), for example, or at Lecce in the heel of Italy.

In civic compositions of the first rank the Italians were unexcelled. They produced imaginative designs which move us still, and they gave real opportunity and support to those who were commissioned to carry out their policies and intentions. It was this kind of patronage which made famous the works as well as the names of such men as Michelangelo, Bernini and Borromini. The advantage of a single controlling mind, so far as design and external appearance were concerned, was taken for granted; and although there was competition and fluctuation in patronage, the most interesting results were those which came from the union of an imaginative intelligence and a definite programme of town improvement or decoration.

The totally enclosed courtyard type of piazza, whether irregular in form as at Siena, or rectangular as in front of the Farnese Palace in Rome (Fig. 185), soon led to experiments

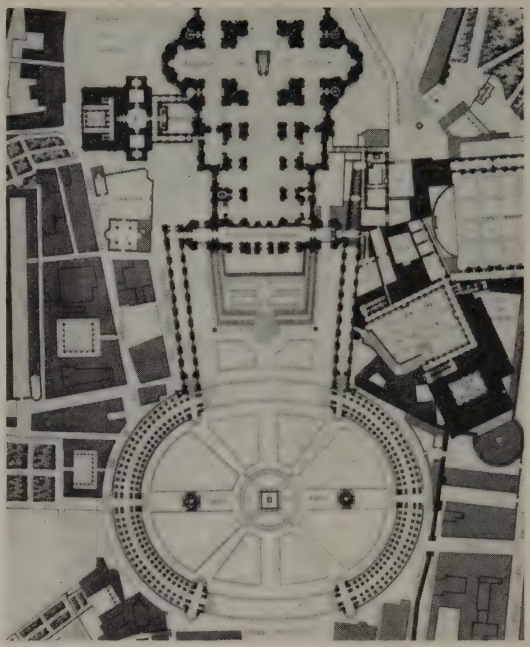


FIG. 186 Piazza di S. Pietro, Rome.

FIG. 184 Piazza di S. Ignazio, Rome

FIG. 185 Piazza Farnese, Rome.

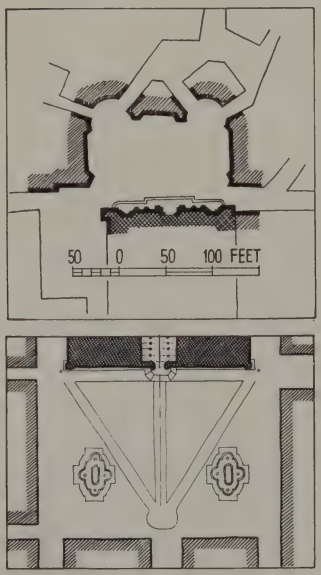


FIG. 187 Piazzetta di S. Marco, Venice.

M. L. Jenkins.

with exaggerated perspective, undulating walls, recessed planes and framed views leading out of the enclosed space. Pope Pius II, for example, commissioned Bernardo Rossellino to construct a piazza in the town of his birth, afterwards called Pienza.* The plan shows four palaces and the Cathedral as the containing walls; but although the sense of an enclosed piazza is kept, it is not completely enclosed. The entrant streets break at this point and therefore lead into the piazza instead of running straight through it (as Wigmore and Mortimer Streets run through Cavendish Square, London, for example). More interesting still are the gaps designed to give framed views from the hillside to the distant mountains beyond. These admit a new dimension into the composition and introduce an element of landscape design.

The same element appears in Michelangelo's layout of the Piazza del Campidoglio in Rome (1538), where a gap is left between the central building (The Palazzo del Senatore) and one of the flanking colonnades, in order to admit a view towards the Roman Forum. Design has taken advantage of topographical accident to exaggerate the perspective of the open space by splaying the two side façades. And every detail, from the heights of the buildings to the pattern of the stone paving, is calculated to reinforce the effect.

It is curious that there is now only one square in London—apart from the temporary "piazzas" of the South Bank Exhibition—where a distinctive pattern of paving and cobbles remains to lend character to the form of the open space, and that is outside St. Mary Abchurch in the City.

Perspective and modelling, curved walls and silhouettes, are all combined in Bernini's design for the Piazzas before St. Peter's, Rome (Fig. 186). Here the façade of the basilica is not only raised but brought apparently nearer to the spectators in the great hemicycle below. Looking outwards from St. Peter's, however, the effect of enclosure is now much reduced. Bernini's partial enclosure (by means of an entrance pavilion) was never realized; and recent reconstruction has opened an axial road through the Borgo almost to the banks of the Tiber.

At St. Mark's, in Venice (Fig. 187), later building—and in particular the Campanile (which collapsed in 1902 and was re-erected)—has tended to dwarf the Cathedral itself; and the splay opens out towards it, thus exaggerating the diminishing effect of perspective.† In other respects, however, the Piazza di San Marco is one of the most magnificent essays in civic design to be found anywhere in the world, and some more of its remarkable features are noted below (Fig. 188).

ARCHITECTURAL AND LANDSCAPE DEVELOPMENT

Many stages of historical development may combine with the incidents of topography and use to create a formal enclosed place over a long period of years. The Piazza of St. Mark's has elements dating from the ninth to the twentieth centuries. As there is no motor traffic there are fewer changes likely to alter its appearance than in the case of most open spaces in the centres of cities. Even so the development of its architecture and of its surroundings is bound to continue, even though imperceptibly. Just as with streets, the minor events of repair and decoration and furnishing and the major events of rebuilding require a constant watch on the part of the authority responsible for it. Changes in social customs, planting, paving and lighting, all create opportunities for a re-interpretation of the function and the appearance of an enclosed place, in accordance with the ideas of the time.

A study of the history of the architectural, and subsequently the landscape, development of such famous places as St. Mark's in Venice, or the Signoria in Florence, or the Place de la Concorde in Paris, reveals a constant desire across the centuries to add to their attractions and to make them more and more significant in the plan of the city. Even in the face of modern

* Rossellino worked here from 1460-1463 and was followed by Francesco di Giorgio ; all the main buildings and the fountain are of that time.

† The piazza is 190 yards in length but narrows down from 98 yards in width at the Cathedral to 62 yards at the opposite end.

traffic the essential values of the great urban squares can be preserved and even improved. That requires a constant devotion to duty on the part of the responsible authority, coupled with a quick appreciation of the effect of social change and technical progress; and lastly it needs certain qualities of vision and courage to call on imaginative designers for all major improvements, and to see that the designs are carried out.

A brief account of the history of the Piazza del Popolo in Rome will show how a plan which seems to be of unified design may owe its present state to a succession of designers and their patrons, all imbued with a desire to extend the dimensions, as it were, of a focal point (Figs. 189-190).

The approach to Rome from the north was by the Via Flaminia, and the axis of this road and of the modern Corso was, of course, due to the Romans. The church of S. Maria was built just within the walls by Baccio Pontelli in 1480. The central obelisk (brought by Augustus from Heliopolis) was erected in 1589, immediately to the north of the fountain that formed until then the focal point of the piazza. Vignola redesigned the outside of the gate in 1561, and Bernini decorated the internal façade in 1655.

One of the three radiating roads, the Via del Babuino, had been planned in 1516, and Rinaldi designed one of the twin churches in 1662. It was finished, and the other church

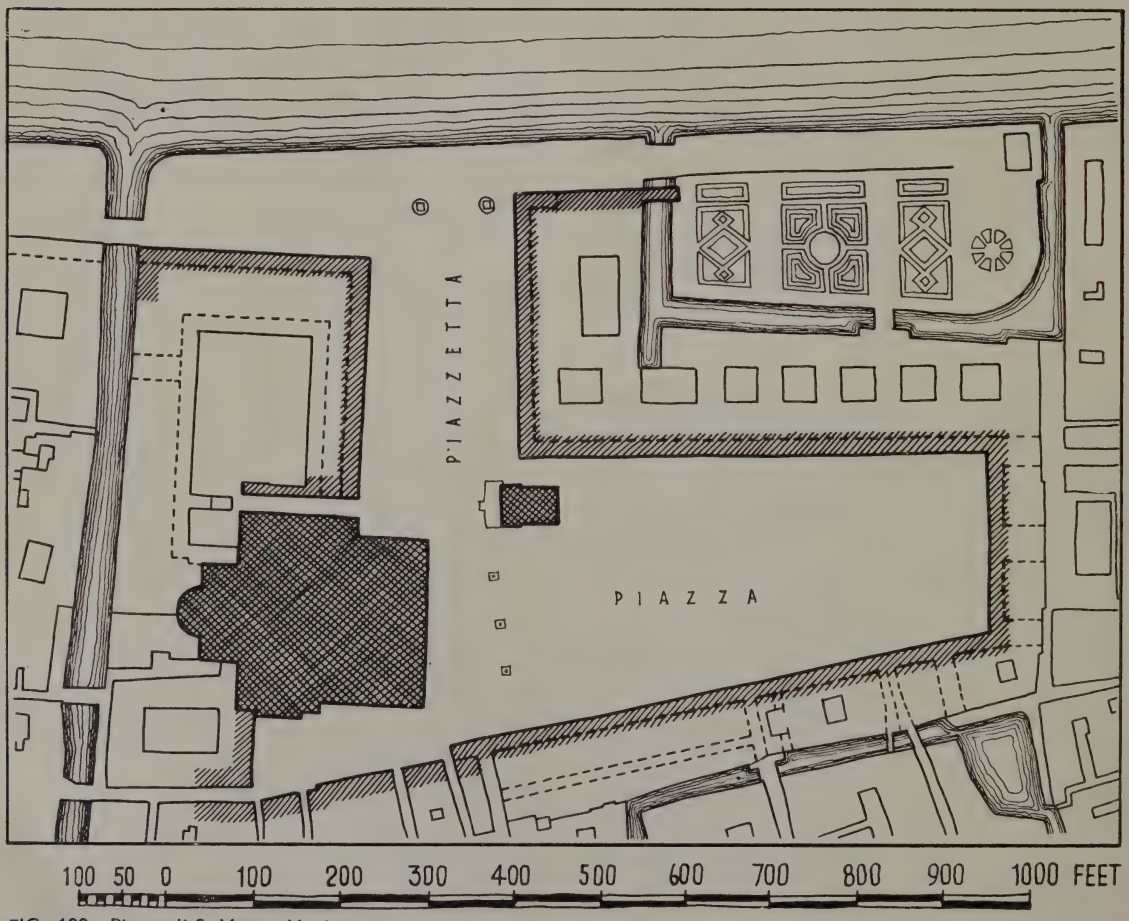


FIG. 188 Piazza di S. Marco, Venice

FIG. 189 Piazza del Popolo, Rome. *Photo Enit.*

built, by Bernini and Carlo Fontana (the bell towers being late eighteenth century).

Then came Valadier, who prepared a scheme in 1794 for the remodelling of the whole piazza in its then existing wedge shape, but with colonnades. Eventually, however, he changed this for the present plan, which was executed between 1816 and 1820. He raised the dimensions of the piazza into the vertical plane by creating a look-out terrace from the hilltop gardens of the Pincio, and joining it to the piazza with ramps, tree-planting, carefully modelled sub-structures and retaining walls. The four central fountains were added in 1825, the gate was widened by the addition of side entrances in 1878, and one of the cross axes of the scheme—the new Via Ferdinando di Savoia—was opened up in 1890.

The Piazza del Popolo is thus a work of civic art in four dimensions—the last dimension being Time itself; and its design, though summed up and considerably extended by Valadier, is due to many famous hands.

Less fortunately endowed by nature and the sun and certainly more gravely threatened by traffic congestion than the Piazza del Popolo, the main civic squares of our industrial cities are nevertheless open to the same process of architectural and landscape development, even though the technique and the designs would be entirely different. Covent Garden Piazza (Fig. 137) might thus be re-discovered, and Trafalgar Square reclaimed; while the entrance to the Mersey Tunnel in Liverpool might be

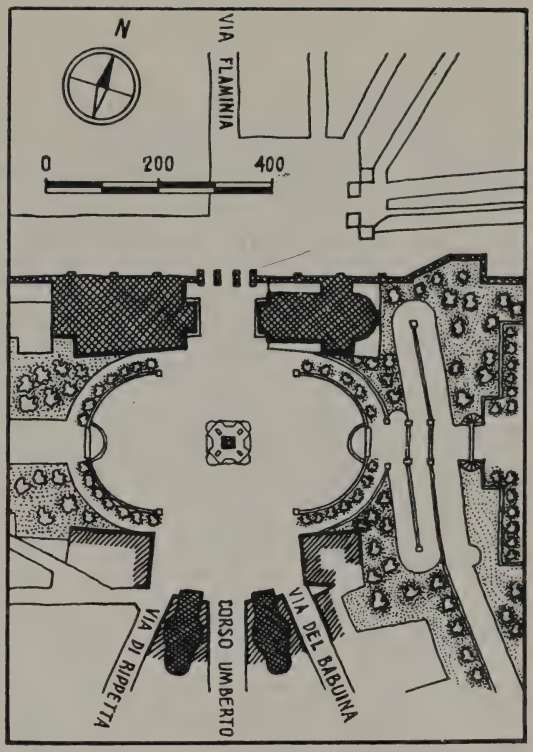


FIG. 190 Piazza del Popolo, Rome.

progressively developed into something more than a gap for traffic and car-parking.

MAJOR AND MINOR SPACES

Great internal auditoria and places of assembly are generally planned today with a major and minor element in their composition. Thus the Royal Festival Hall and the proposed National Theatre on the South Bank of the Thames will each consist of a large hall and a small hall, with common foyers and services.

This combination is also to be found in many famous piazzas and open places.

The simplest combination is that of a major space with its axis in one direction joining or leading into a minor space with its axis at right angles to it. Once again the Venetian piazza of St. Mark's provides a notable illustration. The view from the *atrium* end is of a quadrangle, enclosed by a framework of masonry on all sides but showing shafts of light to indicate the existence of lateral open spaces outside the

FIG. 191 Piazzetta di S. Marco, Venice. *Photo Enit.*

frame. The most beautiful of these is the *Piazzetta* (Fig. 191), which is really a wide passage from the embarkation quay on the Grand Canal, to the point where it enters the major piazza. The two closed sides of the passage are formed by a façade of the Doge's Palace on one side and by the Library on the other. These buildings are dissimilar in style and period but roughly equal in scale; and they are linked to some extent by the fine pattern of paving in between. The view out to the lagoon from the Piazzetta is framed, and thus given added perspective, by the two free-standing columns on the quay. Multiple effects are achieved by this layout. There are major and minor and subsidiary vistas, views in and out, succeeding impressions of enclosure and release from enclosure, contrasts of building material and detail within the greater unity of the composition. The campanile and the three masts provide vertical emphasis among the prevailing horizontal lines of arcades and galleries. Most interesting of all is the slight exaggeration of scale; for small objects that give the human measure—such as steps and balustrades and mosaic and paving stones—are used to emphasize the monumental character of sea and sky and large public buildings.

A sense of progression, obtained by moving from an enclosed space of one shape to that of another, is a characteristic of many famous compositions, both historic and modern. They range from Trajan's Forum in Rome—the remains of which can still be seen, including the great column commemorating his victories—through a long list of seventeenth and eighteenth century *places* which still retain most of their original features, to the contemporary exhibition layout for the Festival of Britain on the South Bank of the Thames.

One of the most remarkable and complete

of all these is the group of three connected open spaces at Nancy in Lorraine (Fig. 192). Héré de Corny designed these for the exiled King of Poland in 1752-1755; and they consist of (i) a Town Square containing the town hall and other regular façades with metal screens at the corners, which is called *Place Stanislas;* (ii) a connecting colonnade leading from it to a triumphal arch on the line of the town wall; (iii) the oblong and tree-planted Place de la Carrière, with courtiers' houses on either side; and (iv) the Place Royale, where the existing Palais du Gouvernement was made the focal point of the composition and was linked to the oblong place by two semi-circular colonnades of masonry. One of these leads out to the park. Here, and in the Place de la Concorde in Paris, and again in the group at Bath—Queen Square, Gay Street, King's Circus, Brock Street and the Royal Crescent—changes of shape, direction and aspect provide never-failing interest in the composition (Fig. 193). Yet the designs are unified in their scale and in their use of building materials, so that one is aware of the effect of combined architectural imagination and control.

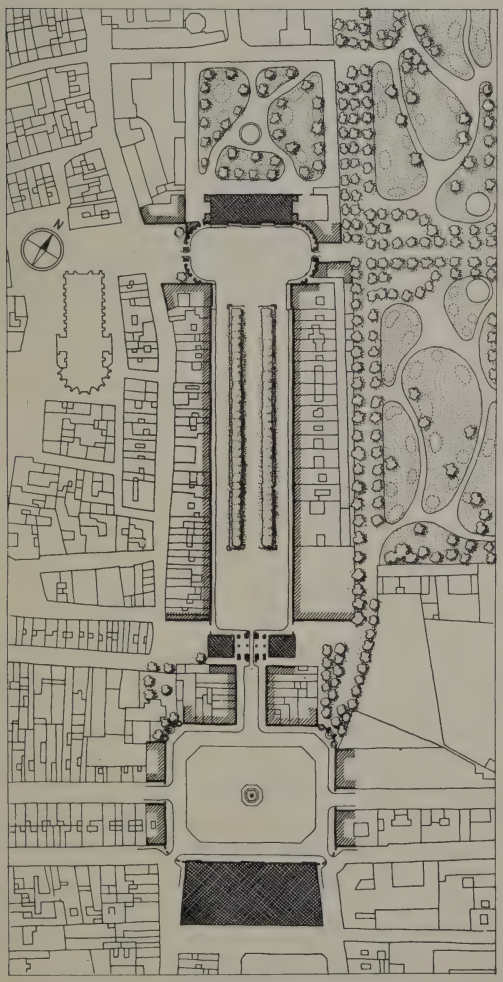


FIG. 192 Nancy—connected *places.*

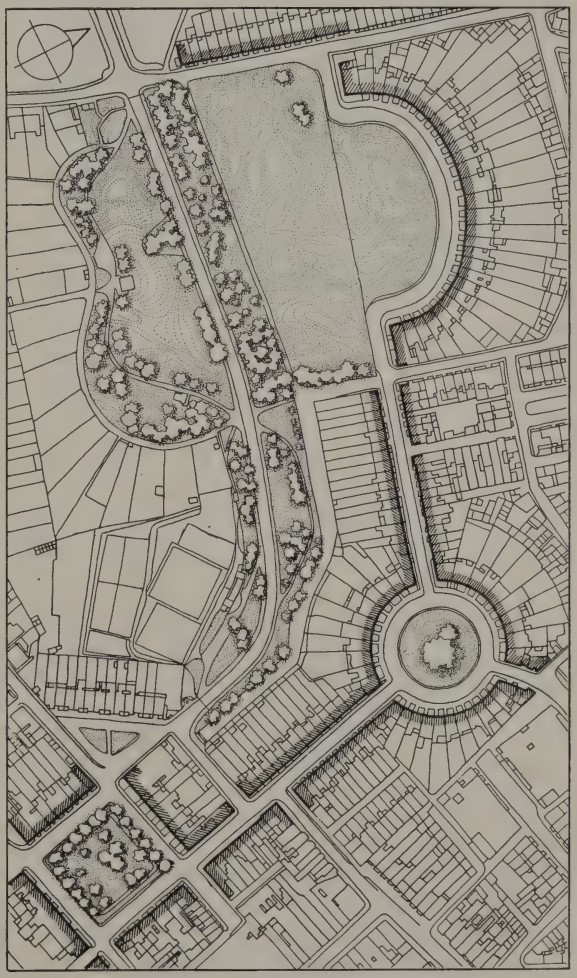


FIG. 193 Bath—connected spaces.

CHAPTER IV

STREET FURNITURE

Street furniture is a subject of study in itself. The biggest problem is not so much the design of individual items—although there is room for considerable invention here also—but in the co-ordination of design over a very wide range of objects, from buildings and kiosks to lamp standards and bollards (Fig. 194). The practical requirements of the utilities are numerous, varied and exacting; and as they are pressed by the responsible authorities in the interests of road safety, traffic control, illumination, information, convenience and even comfort, there can seldom be said to be an exact or co-ordinated programme to which a designer could work.

There are, however, some features of urban squares and thoroughfares whose design should have equal consideration with that of the architecture and the planting; and preferably by a designer who is either skilled in this particular branch of industrial design or has already been at work on the planning or the building of the area in question. Where no standard or proprietary article will do, a special or adapted design may be the only alternative.

Lighting standards are one of the most common items of street furniture to be seen, and one of the most difficult to design satisfactorily. When closely spaced, in order to meet a demand for strong and even illumination, they may easily mar the appearance of a public place.

There can be two approaches to the subject of street lighting standards, both of which can lead to satisfactory results provided they are consistently followed and not confused. The one is to make the standards a definite part of the design of the street or open space as a whole, giving them emphatic and decorative treatment and placing them in commanding positions as items of town furniture worth looking at in themselves.

The Victorian standards on Southwark Bridge, and along the Albert Embankment, the bronze masts in the Mall, and the short cast iron George IV columns in Regent's Park, with their fine lanterns of curved glass, are all examples of this type to be found in London.

It must be added that this kind of standard—particularly if it is in bronze—is likely to be initially costly and it may not be able to comply with the most economical systems of illumination. On the other hand, both by day and by night it will be part of the decorative design of the open space in which it is situated.

The second approach is more utilitarian. It consists in accepting the functional distribution of the sources of light as recommended by the illumination engineer, and making the supporting apparatus as plain, as inconspicuous, and—for want of a better word—as " streamlined " as possible. In point of fact not one person in a hundred notices such standards after they are once installed. Like rainwater pipes and bus stops, they are accepted as part of the machinery of modern urban existence.

To be successful in this way lighting standards should therefore not draw attention to themselves. They should be slim and of a sympathetic texture and colour. Rough grey concrete looks drab and clumsy. Also, the standards should be exactly vertical, as they are seen against the vertical lines of buildings. If brackets are used the horizontal or tilted arm is less conspicuous than the drooping curves of the " daffodil " varieties. For similar reasons double-armed standards, centrally placed, are less disturbing than the " gibbet " type with a single arm in staggered positions on each side of a street. Metal is usually less bulky than reinforced

FIG. 194 Street furniture, Cockspur Street, London.

FIG. 195 Slender metal standards, Parliament Square, London.

concrete, and may be more suitable in crowded thoroughfares and in front of historic and picturesque buildings (Fig. 195). And where the switch apparatus cannot be put below ground, care has to be taken that the transition from the stout base to the slender column is competently handled.

Seats, steps, shelters, ramps and railings, bollards and balustrades, are other items of street furniture which are worth designing with special care. Not only do they give "scale" to a composition, because their proportions are closely related to those of the human figure, but they can be used to give added interest to a street scene, to make changes of level, and to define areas more or less withdrawn from the main circulation.

During periods of metal shortage railings are a special problem. In many level gardens and other public places they can be dispensed with altogether; but they are often needed for reasons of safety or protection, and they are useful also for subdividing large open spaces where hedges are impracticable and walls too exclusive a barrier.

Far more difficult for planner and designer alike is the mixed assortment of notices, nameplates, lights, KEEP LEFT signs, litter bins, call-boxes, street refuges and public conveniences which may have to be accommodated in a street or a square. Only two precautions are of much help. The first is to ensure that an intelligent choice is made from among the standard fittings and equipment supplied for these purposes, and that they are arranged in an orderly way. The second is to allow for the special case, where even the best standard article is incongruous or inadequate, and to design something new altogether, in collaboration with the engineers or technicians concerned. Thus kerb or floodlighting may be justified in certain circumstances in place of normal street lighting; or again, several utilities, such as shelters, lavatories, call-boxes, notice boards and litter bins, may be combined in a specially designed street pavilion.

CHAPTER V

OPEN PLANNING

An " open " layout may be the result of deliberate planning or of a long process of development (more or less controlled), or it may be purely fortuitous.

Layouts that are planned are more likely to be found on the margin of the central area of a city than at the very core, owing to the scarcity and cost of the land available. In relatively small patches, however, as in the case of the group of buildings for the headquarters of the United Nations in New York, (Fig. 199) redevelopment projects are beginning to assume a more open pattern of planning. There is no doubt that the future will bring extensions of this principle to central area layouts of larger scale.

The characteristics of this kind of layout or " townscape " may be those of open streets (as opposed to corridor streets), or of a system of inter-related open spaces (such as those at Nancy), or of an urban park or garden threading its way between buildings. In each instance the open layout is a development of a well-recognized method of town building; but the artistic aims of the plan differ somewhat in kind as well as in extent. It is one of the objects of open planning to create incidental, progressive and varied views throughout the whole composition, as compared with the more formal and symmetrical set-pieces of traditional civic design, with its avenues, forecourts, squares and traffic circles.

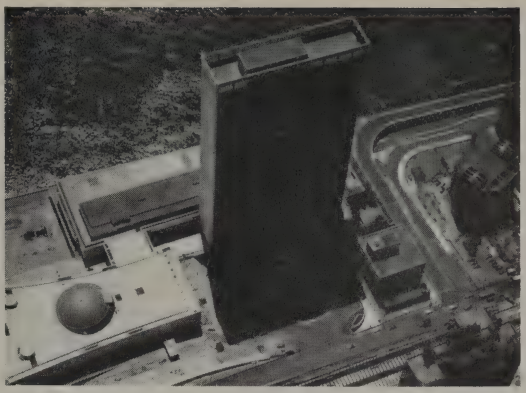
A further object is to provide a setting for the free-standing building—which is lit and therefore visible from all sides, and is without emphasis on one façade only at the expense of others—and for free-moving traffic, unembarrassed by constant pedestrian crossings, building entrances, traffic lights and vehicles standing at the kerb.

This can only be done by introducing some form of open or planted space, as an insulating medium, into the layout. It may consist of grass or water or pavement or any combination of these horizontal surfaces; while in the vertical plane both near and distant walls of buildings, glimpses of trees and the sky, and perspective views in various degrees of depth, will show that the space is only part of the larger pattern.

Many historic layouts show, by design or accident, some of these features of free composition. Much has been written, for example, about the balanced symmetry of ancient sites such as the Agora and Acropolis at Athens (Fig. 197). Here the Parthenon stands as a symmetrical building, asymmetrically located. The paths and processional ways and sacred places are as significant as the buildings themselves in determining the pattern and composition of the group. There is nothing dull or repetitive about the layout; the placing of buildings, whether dictated by religious custom, or art, or mere convenience, is in most cases so right and inevitable that the eye and the mind are satisfied by it. Yet at the same time the changing elements in the scene—light and atmosphere and the views of Athens framed by the columns—are always new and often unexpected. And in this instance the only trees are on the slopes of the Acropolis (Figs. 196 and 198).

Other examples of free planning within historic centres can be found in some of the greater monastic, collegiate and royal establishments, where a system of inter-related open and enclosed spaces has been extended and developed during the course of years. Whitehall, in Westminster, developed in this way from the palace layout of Cardinal Wolsey and from the grounds of the adjacent Abbey (Fig. 200). To this day, in spite of the pressure of government building, some remnants of the old precinctual feeling remain: and Parliament Street is not yet a corridor street.

FIG. 196 The Erechtheion from the Parthenon.



Unations

FIG. 199 United Nations permanent Headquarters, New York City.

FIG. 197 The Civic Centre or *Agora* of ancient Athens.

FIG. 198 The Temple of Nike Apteros and the slopes of the Acropolis.

FIG. 200 Whitehall, London—the old Palace and the modern street.

FIG. 201 Colleges and the Backs, Cambridge. *Aerofilms Ltd.*

THE COLLEGIATE TRADITION

At Oxford and Cambridge the old open system is much better preserved. This is particularly so in the range of college buildings, courts and gardens between Trumpington and Trinity Streets on the east, and Queens Road on the west of the Cambridge " Backs " (Fig. 201) : also at Oxford, in the series of quadrangles and gardens from Christ Church to Merton (Fig. 202).

Across the Atlantic the famous " Yard " at Harvard (Figs. 203 and 205) exhibits an even more free disposition of rectangular buildings within a pedestrian precinct planted with trees and grass. A sense of enclosure persists, but it is due to freedom from traffic and other big town distractions and not to an encirclement of masonry. The " Yard " has the atmosphere of an academic precinct, and is not solely an architectural oasis in an urban desert.

In another part of the same college, the layout of the *Harkness Commons* (Fig. 204) (designed by Professor Gropius and the Architects Collaborative) carries forward this long-established art of space enclosure and expresses it in terms of contemporary building. Human in scale, subtle in its use of levels, and inventive in its landscape features, this group of post-graduate living quarters subordinates its architecture to the social purposes which it serves; and although it stimulates, it does not attempt to confine or dominate them.

Aerofilms Ltd.

FIG. 202 College quadrangles, Oxford.

FIG. 203 Harvard Yard.

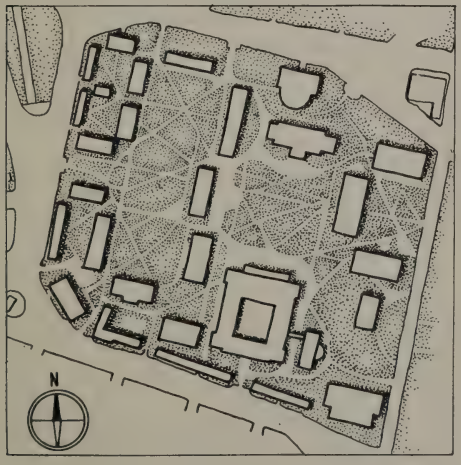


FIG. 204 Harkness Commons, Harvard.

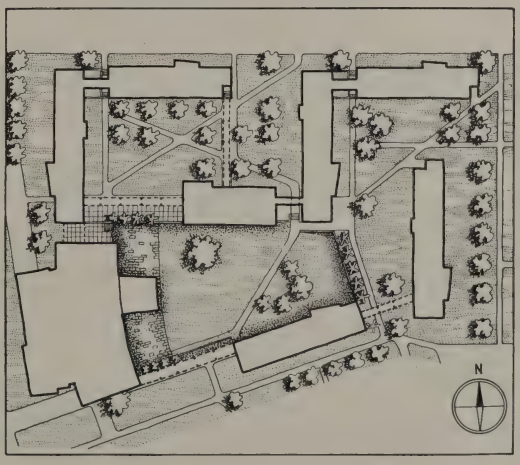


FIG. 205 Harvard Yard.

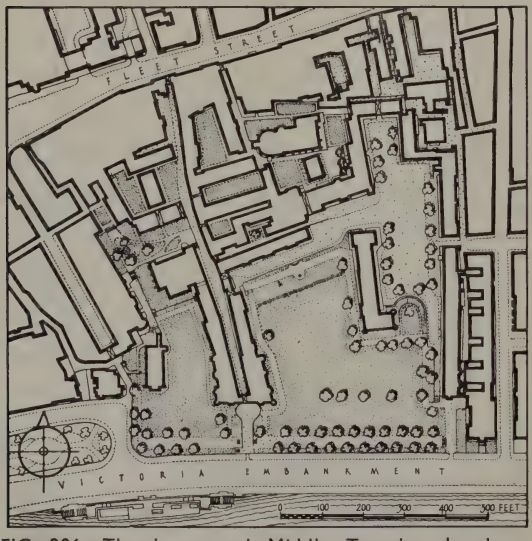


FIG. 206 The Inner and Middle Temples, London—before war damage.

A point of interest is the sinking of the lawn and terrace in front of the common rooms, and the approaches by steps and by a ramp. This establishes two main external levels and creates more interesting views both into and out of the enclosure.

The Inns of Court in London follow the collegiate tradition in so far as they combine open and courtyard planning with buildings not more than three or four storeys in height. Lincoln's Inn and Gray's Inn and the Inner and Middle Temples (Fig. 206) all have areas of very compact planning diversified at some points by free-standing buildings and large quadrangles containing grass and trees. The passage of the sun from east to west creates lighting effects of great variety and beauty in a setting of this kind, particularly where the south side of the composition is relatively open.

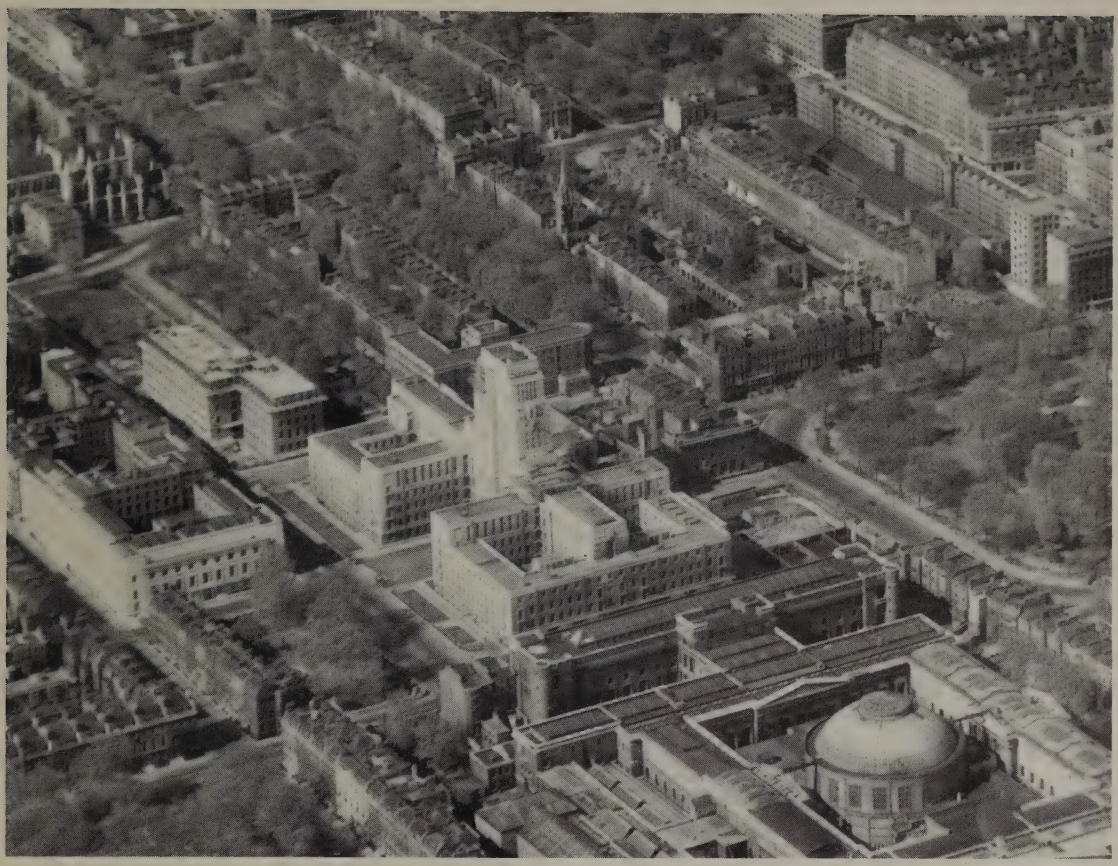


FIG. 207 The University of London, Bloomsbury. *Aero Pictorial Ltd.*

THE PRECINCT

In Bloomsbury an opportunity exists for a contemporary development of this method of planning. It was latent in the layout of the domestic squares of the Bedford Estate* and was carried into the academic field by Charles Holden's plan for the University of London (Fig. 207). As this may one day be extended to link up with other institutions and colleges in the same area between Euston Road and the British Museum, the idea of the " precinct" proposed in the County of London Plan may come near to being realized. It will be a loss indeed if this is achieved by overbuilding and by a reduction in the present amount of open space. If ever there were a case for " open " planning it is here.

Buildings require light on all sides as soon as they exceed quite modest dimensions. Indoor workers, and particularly the sedentary ones, are entitled to the reliefs of eye and mind that are afforded by more distant and more interesting views than those of the opposite face of a room. The idea, so commonly held, that all central areas in towns should be built over to the maximum extent possible—the remaining space going into streets—will no doubt die hard. But it has the sanction neither of historic practice nor of modern theory to support it. Buildings, once they grow out of the collegiate scale and install lifts, will of course tend to grow higher. But without a limit of accommodation or floor space relative to the land which they occupy and which surrounds them, free planning, to a

* For a description of the work of James Burton and Thomas Cubitt in Bloomsbury, see John Summerson's *Georgian London*: Chapters XII and XIV.

reasonable standard of light and air and amenity, is quite impossible. This limitation will be greater than that now imposed by structural systems or the cost of expensive foundations; and has in fact nothing to do with them. It arises from the need to maintain a balance between public movement and private working space, between the rights of owners and occupiers to undisturbed enjoyment of certain amenities, and the rights of the citizens generally to impose conditions whereby these are maintained without the sacrifice of order and equity and other civic values. Design itself should be the reflection of individual initiative working within the limitations set by this larger programme. Without it, the sheer physical demands of a modern city centre for working and recreation space, for circulation and public transport, for car parks and queueing space, for telephone exchanges and electricity and sub-stations, and public services of all sorts, become overwhelming. The only result is a state of what might be called " planned congestion ". It is then quite idle to expect the amenities—and incidentally the real urban values—possessed by such permanent assets to London as Lincoln's Inn or the Inner Temple, to be maintained.

FIG. 208 Corby New Town—Plan of Town Centre now under construction.

W. G. Holford and H. M. Wright, Consulting Architects

OPPORTUNITIES FOR DESIGN

Plans for the centres of New Towns naturally show a more marked tendency towards a free system of planning and of landscape than is possible in the old ones. The proposals for Harlow, Peterlee and Corby (Fig. 208) to take only three recent examples in England—show points of concentration, short shopping streets of the corridor type, partially enclosed squares, symmetrical public buildings and many other traditional features of civic design. But these features are all subordinated to an open and varied pattern of urban landscape for the town as a whole; and this has far more in common with the English collegiate tradition than, for example, with the achievements of Baron Haussmann in remodelling Paris during the last century.

Nevertheless these are all in embryo. Even when completed, the New Towns will be only of medium size; and the problem of reconstructing the core of an existing great city still remains the town planner's most difficult task (Fig. 209). For this the war-damaged towns of Europe and the expanding cities of North and South America are the most interesting sources of new ideas.

FIG. 209 Coventry—Redevelopment Plan for Central Area.

In Britain itself the tradition of urban design is a long one, and the designer within the central area of a town is bound to be conscious of what has gone before. If he is skilful he will make a virtue out of his limitations; that is to say he will accept the overriding necessity for keeping his development in scale with the site on which he is building, with the transport and other services which are available, and with the human activity for which he is providing a physical shell.

In a city, external space is as important in the long run as internal space under the roof of a building; the view outwards from a window is as valuable as the view towards a building from the street; and the alleviation of a tree or a piece of grass on which the eye can rest is as necessary to the citizens as the bustle and activity of crowded places.

The discipline of a limitation of floor space or density, therefore, without which no real improvements in urban planning can begin, is not onerous for the designer. It is true that it may worry his client who, once in possession of an important site, quite naturally wishes to fill it with as much accommodation as it will hold. And he will ask what objection there is to taking advantage of modern techniques of construction to build higher, deeper and wider than before. The designer's answer must be that he can always produce more floor space, but beyond a certain point it will be at the cost of living and working standards, amenity, and freedom of movement. Once a state of chronic congestion is reached, all subsequent remedies become more costly and more disturbing to apply.

The limitation of bulk is, however, only a measure of control—as dieting is for human beings. The designer's real opportunities arise in devising or re-creating imaginative forms of building and open space which will carry the urban tradition a stage further. Moreover the projects should appeal to the residents and potential users of each district as being something which they would really care about and help into being. The designer may produce his plans and pictures, and these may be sanctioned by local government officers and central

government administrators; but unless they touch the imagination of the public, they remain an embarrassment. The fact is that while individual buildings, or even building groups may well be in advance of their time, unfamiliar in appearance and revolutionary in their basic ideas, the redevelopment of the whole central area of a town or a neighbourhood cannot run too far ahead of public appreciation. In the first place it is bound to be slow, particularly in periods of restricted capital investment; and being slow it offers many opportunities for objection, revision, compromise and blank inertia. In the second place it is inconvenient, because it involves disturbance and even hardship for some, and re-adjustment for many. In the third place it is costly, not necessarily or even generally in the long run, but because improvements in standards, demolition as well as new construction, increases in open space, and uncertainty over the maintenance of rateable values, all make the public—as taxpayers—unwilling to shoulder immediate burdens even when they think that handsome dividends may one day be paid. They comfort themselves with the delusion that a policy of " make-do-and-mend " will not only save money but can be indefinitely maintained.

Finally, and perhaps most fundamentally, there is in human nature, amid the excitement with which it contemplates a brave new world, a dread of the total loss of the old one. To many who live in cities the present is a tyranny, and they would gladly escape it completely; but to others the technocrat's ideal town is also a tyranny, and they would want to modify it before they could feel happy in it.

But the very essence of the city, as we know it, is in its combination of the old, the converted and the new; and therefore, like hill-climbers, we do not care to relinquish one foothold until we are quite sure of the next. It was, after all, one of the great merits of the South Bank Exhibition of 1951, that from the midst of an entirely contemporary composition, or from the external galleries of the Royal Festival Hall, we could see a whole panorama of London north of the river, from the Houses of Parliament on one side to the dome of St. Paul's on the other.

With these further limitations, then, the town designers must clearly concentrate their forces, both in time and place. As soon as the very broad powers and principles are established by the approval of the Development Plan of a town, each sector, neighbourhood or district should establish its own design objective and its sense of direction.

In London, for example, it is not only a case of Bloomsbury or Westminster becoming " precincts ", and Stepney and Poplar a series of " residential neighbourhoods ", while the Inns of Court and the Royal Parks are preserved from encroachment. Bloomsbury should in fact develop much further on the lines that have already given it form and character, namely in the inter-relation of linked and tree-planted open spaces, and in the open collegiate layout of its buildings and terraces. Stepney should become even more like Stepney —cosmopolitan in its architecture as in its population, hardworking, compact, and economical in everything except schools and playgrounds. And the same with every other entity that goes to make up the metropolis, or the industrial cities of Lancashire or Yorkshire or Tyneside or South Wales.

The designer's task is to seek out the local or regional or metropolitan character of a place, and show how it can be extended and intensified by means of new buildings and landscape, street furniture and pavings, town planning and civic decoration. In this brief review of the design problems of central areas no formula has been arrived at and no recipe given to the process by which the designs themselves are created. That is the designer's art. It was said at the beginning that experience and observation would go most of the way; and no amount of talk or criticism can guarantee success. None the less, every play must have its stage, however simple; and in civic design—which is in many ways the greatest of the social arts—the designer, along with the stage manager and the producer and his actors, should be given his special part to play.

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